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Lectures

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Notes
from
Lectures
on the
Practice of Physic
by
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PHILADELPHIA

Lectures on the Practice of Physic.

We are next Gentlemen to enter upon the practice of physic. It shall be my Endeavour to enable you to execute this with honour to yourselves and advantage to your Fellow Creatures. We are now to observe that when we come to the Bed side of a patient there is no longer time for Speculation. Some have supposed that a few Months were sufficient to acquire all the Knowledge necessary to this Science, but the more candid and discerning find that Years are necessary. In order to acquire a competent Knowledge in this important Study, a general Knowledge of the Latin Language with a Sufficiency of the Greek is necessary to understand the Terms of physic and the Derivation of Words also a general Knowledge of Natural philosophy, with an accurate Acquaintance with Physiology & Anatomy, Chemistry and the Materia Medica. The History of diseases may be learned from the Writings of Authors, but the best Knowledge is acquired from Experience; as you will know a person much better by seeing him once, than by reading ever so many descriptions of him. Thus you will understand the Nature and Appearance

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of a Disease much better by seeing and Observing its Cours than by reading the most accurate descriptions: hence the u of attending Hospitals, and the Advantages resulting from them are very eminent. In all Animals there are certai Functions necessary to Life, hence a disease may be defin to be That State wherein the Functions are unduely pe-formed or not performed at all; the Cure of which de-pends upon restoring them to their natural State. This is to be done by removing what is injurious or restoring wh is wanting; thus the Vomiting that arises after the swal-lowing of Sublimate is an Instance, this is to be removed by Emetics, or else we restore the parts injured by Dilu tion with warm Water. Sydenham's Definition of a Fev is an Effort of Nature to throw off an offending Matter; b this is not just, as it applies only to particular symptoms. In general a Disease is an Effort to restore Health, but this regu regulation, as it is sometimes too powerful and at other tim too feeble. Physicians are not only to assist, but direct her Operations; an Instance of this we have in the Gout, which when it attacks the Stomach or Head we are to determine to the Extremities. In the Cholera Morbus, the vomiting and purging are severe we are then to assi Nature by employing Opiates. In acute diseases, Natu is the principal Physician and is to be assisted as she

indicates

+ The Veins formerly evident disappear

∓ similar to the Skin of a new plucked Goose hence it has obtained the appellation of Cutis anserina.

indicates. In chronic Diseases little dependance is to be placed in her Efforts. In Violent Inflammations where there is danger of putrefaction Nature is not to be trusted to. The general Rules for the treatment of Acute Diseases are first accurately observe what Nature points out; Second, never attempt to force a Crisis here we should use but few Medicines. thirdly never use Stimulating Medicines during the Inflammatory State of a Disease. As acute and putrid diseases constitute by far the greater number of diseases, the first I shall treat of is Fevers, and of these Intermittents deserve the foremost place as they may serve as a Type to all the rest. The paroxysm of an Intermittent comes on with a sense of General Lassitude and involuntary Yawning, & Stretchings, a paleness of the Countenance, the size of the whole Body shrinks, the Skin contracts, the papillæ appear prominent and rings upon the Fingers that were commonly tight now fall off; this prominence of the papillæ is called Goose flesh; this is followed by a sense of Cold in the Extremities, in the Hands and feet from whence it is communicated to the whole Frame. First in the Back, & moves from one part to another with a sensation like as if Cold Water was running down the Back; this is by degrees extended

extended Chillness at length Tremors
over the whole Body with Rigors and convulsive Con-
cussions particularly in those parts least balanced by other
parts, hence the Chattering of the lower Jaw. In a short
time the Skin discovers a natural Fever Heat although the
patient complains of being cold. When the Chillness
comes on the Extremities feel cold to the touch; after some
time the Cold and Tremor give way, which is soon fol-
lowed by flushings of Heat over the whole Body, which
increase untill it overcomes the Spasm or Cold: then
comes on a redness and Turgescency of the Skin, genera-
ly in the Face first it is first dry, then the Heat begins to
abate with a moisture on the Skin, this increases till a
profuse Sweat over the whole Body takes place which
terminates the paroxysm. The Symptoms just now e-
numerated are the common Characteristic of the Parox-
ysm of an Intermittent Fever: I must however pre-
mise that the paroxysm of an Intermittent is gene-
rally divided into three stages which are the Cold
Hot, and Sweating, and are obvious to every Bystander
At the approach of the Cold stage the pulse becomes smaller
and weaker & more frequent than usual, as the Cold increases
the pulse becomes more irregular unequal & intermitting
As the Hot stage approaches, the pulse becomes more
regular

‡ first percieved internally and then extended over &c

* and the System returns to its natural State.

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regular, at its height it is steady full and strong, and by degrees grows softer and as the Sweat breaks out the pulse diminishes in proportion, and returns to its natural state. With the pulse the respiration undergoes a considerable change, in the Cold Stage it is small frequent and laborious with a kind of Stricture across the Breast; in the hot stage it becomes more frequent and easy, and when the Sweat breaks out it returns together with the anxiety to its natural state. The stomach also is affected there is loss of appetite and a particular aversion to animal food; those accustomed to chewing Tobacco, lose their relish for it. As the Cold fit advances a Nausea and Vomiting comes on, & increases towards the latter part of the Cold Stage. This Vomiting seems to contribute towards bringing on the Sweating fit, and as the Sweat breaks out the Vomiting & cease entirely. The Secretions and Excretions are also affected, in the Cold Stage the Saliva is tough and dry; in the Hot fit the Mouth is entirely dry and continues so till the Sweat breaks out, when the natural Moisture returns. The Urine during the Cold Stage is Cold and colourless without Cloud or Sediment &

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is discharged in large Quantities: In the Hot Stage it is high coloured but still without Sediment. as the Sweat comes on the Urine returns to its natural Colour and deposits a lateritious Sediment. Stools seldom occur unless in the beginning, till the hot Stage is over, except in Cases accompanied with Diarrhœa. Tumours subsisting on the Surface of the Skin suffer considerable Diminution during the Cold Stage and Ulcers are dried up, but both return to their natural states as the Sweating comes on. In the Cold Stage a pain in the Head is felt, which comes on with a Throbbing of the Temples and is generally removed by the Sweating Fit returning. During the Cold Stage Sensation is impaired, but as the Cold Fit gives way to the Hot the Sensibility returns and is in some cases increased to such a Degree as to become painful, but returns to its natural State as the Sweat breaks out. During the paroxysm the Intellectual Faculties such as Memory &c are very much disturbed, and as the Hot Fit advances the patient becomes delirious and sometimes comatose, but these Symptoms go off as the Sweating Stage advances. I must observe however here, that the Cold Fit comes on with Drowsiness frequently with Coma. In the paroxysm the Organs

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of Sight and Hearing are often rendered so sensible that they cannot endure either strong Light or Noise; there have been Cases where total Blindness has been brought on which went off with the paroxysm. These are the most general and common symptoms but they differ in different Patients. The time that a paroxysm continues is various, seldom less than five or more than twenty hours; this constitutes a single paroxysm. Sometimes the Cold Fit continues several Hours, at other times not one, and there are but few Fevers that consist of one paroxysm only. It will be necessary here to distinguish what is meant by Intermission and Interval. By Intermission we mean that Space of time between the End of one paroxysm and the Beginning of another; and by Interval we mean that Space between the Beginning of one paroxysm and the Beginning of another. The length of the Intervals is also various, the most common is the Tertian period which is that of 48 Hours, the Quartan 72 and the Quotidian 24 hours; these do not always return at the same Hour, but generally vary an hour every Fit. To constitute a paroxysm of an Intermittent it is necessary for it to be formed and perfectly over in 24 hours and before another return; but if the

succeeding

8 succeeding paroxysm comes on before the other is entirely gone off, it is then called a Remittent, which is only an Intermittent protracted. If those remissions are without Sweat and Exacerbations without Cold, it is then called Febris continens or a Continual Fever. Practical Writers mention a Continent Fever which has neither remission, Intermission or Exacerbation, if such a one does exist it is very rare and what I have never found or seen. Quartans frequently change to Tertians, Tertians into Quotidians, these into remittents and these again into Continual. These are repeated to show the Connection between them and these may serve as a Model for all the rest. We shall now consider the proximate Cause of Fever, which has been a Subject of Enquiry these many Years. Hippocrates supposed it to exist in the Fluids and hence arose the Doctrine of Concoction. Sylvius supposed it to exist in an Acid, hence the Use of Alkalines, and all that Class of Medicine known by the Name of Antacida: Boerhave supposed it to be Viscosity, hence Attenuants; others supposed it to be occasioned by a Morbific Matter but this is not the Case. There are Fevers produced by Cold Fear and other Causes, with all the Essential

Circumstances

Circumstances of Fever and terminating by Sweat; & yet at the same time, without any Evidence or Suspicion of Morbific Matter. We shall conclude that it is entirely a Disorder of the Nervous System, and that it is we infer from the following Reasons: 1st If Morbific Matter was the Cause, the person would always sicken gradually, but, in most Cases, there is no Indisposition previous to the Attack. 2nd The Fit is frequently brought on by Affections of the Mind: Dr Sydenham makes mention of a person having a Fit from seeing a Dormouse. 3rdly It is sometimes cured by Affections of the Mind; in these Cases there certainly is not any Morbific Matter in the Case. 4th It is sometimes produced by Nervous Affections, as Convulsions in Children. 5th It continues during a Salivation, which would, if any Morbific Matter was present, carry it out of the System if seated in the Fluids. 6th It is most common to those Constitutions that are the most sensible and irritable. 7th It is cured by the Bark which produces no Evacuation but acts entirely on the Nervous System. 8th Nervous Diseases as Epilepsy and Palsy are frequently cured by terminating in an Intermittent Fever. 9th Intermittents are sometimes cured by external Applications

cations as Garlic, Tobacco and other Substances applied to the Wrists. 10th It is mitigated by an acute pain in any other part. That the Seat of the proximate Cause of Fever is in the Nervous System is obvious from its Effects. First it produces a Spasm on the extreme Vessels in consequence of which a Stimulus to the Heart and Arteries is produced, this Spasm is the Foundation of the Cold Fit. This Opinion Hoffman and Whytt embrace. Whytt says it is not owing to inspissated Lymph but to a Spasmodic Constriction, this appears a simple and plain Account, and is the best that has been delivered. No doubt but this Spasm which is the principal Cause of the Cold Fit may be produced by opposite Causes, viz. Debility and Irritation. In one the Vis Vitæ is above its Natural Standard, here the Cure depends on those Remedies which will lessen or diminish the Action of the Heart & Arteries, in the other the Vis Vitæ is below its natural Standard as in the Autumnal Remittent & Intermittent, putrid and Nervous Fevers. In this Case the Indication is to support the Vis Vitæ, by increasing the action of the Heart and Arteries. We are next to consider the proximate Causes that have been thrown out by some of our Moderns and particularly that of the Celebrated Dr Cullen. Dr Cullen on being elected Professor of ~~Physic~~ the Practice of Physic published a Work for the Use of those Students who attended

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=ded his Lectures, he divides the proximate Cause into three Stages, viz, Debility, Spasm and increased action of the Heart and Arteries. The two latter we allow, but to the former which is Debility as he explains its Ope=ration I cannot subscribe; He argues thus, that the Debility together with the Cold Stage and Spasm proves as Stimulant to the Heart and Arteries, thereby producing an increased action of them, till the Energy of the Brain is restored, till it has had the effect of extending this Energy to the extreme Vessels and of restoring their action, and thereby overcoming the Spasm affecting them. But how Debility or diminished Energy of the Brain should prove a Stimulus to the Sanguiferous System so as to produce increased action and Force in the Circulation sufficient to overcome the Spasm on the Extremities is to me a Pa=radox: it is founded on Hypothesis and we may as well say Strength arises from Weakness. To me it ap=pears more rational to divide the proximate Cause into two Heads, and say, the they proceed from Debility and Irritation which is not hypothetical but demonstra=ted by the Symptoms of Fever and leads to the most important distinctions. Hypotheses and Theories are of no Use at the Bed Side of a Patient. The first Objects that strike a Physician or ought to strike him are the State of the pulse, the Appearance of the Countenance,

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to enquire into the Habit, to know whether the powers of Life are too weak or too strong and form his Indications accordingly. The two other Theories were sufficiently refuted when on the Materia Medica; but there is one which is that of Boerhave, he says it consists in Viscidity lodged in the Mass of Blood, and Inertia of the Animal Fibres, but that this is not the Case appears 1st There are no Experiments that prove that a Viscidity of the Blood takes place.
2nd Intermittent Fevers do not happen when the Blood is most sizy as in Rheumatic and Pleuritic Cases.
3rd They often alternate with diseases of the Stomach and Intestines.

4th Because Medicines acting on the primæ Viæ often remove Fever.
5th Bark cures these Fevers by its action on the primæ Viæ. ∓

6th The Effects of Vomiting — — — — — — — Great pain has sometimes prevented an intermittent.
7th Some have been freed from a Fit by a Fright, such as the of seeing a Fox run across a Room.

‡ 6.th Vomits and Bitters often cure Intermittents Sailing has often cured them.

7.th Great pain has often cured an Intermittent. It is often cured by Affections of the Mind. Garlic to the Wrists sudden Terror, Anger have cured Intermittents - and as the Sight of a Rat has brought it on in some so it has cured it in others —

I shall now go on to consider some of the most remarkable Symptoms attending Fevers. First there is a Horror or excessive rigor over the Whole Body, the same as happens from excessive Cold externally applied to the Body. Secondly, A Nausea and Vomiting, this is occasioned by the Spasm on the extreme Vessels; when this is removed the Sickness and Vomiting go off. I cannot however forbear giving you a Fact of Dr. Sydenhams in the Plague which was, a Vomiting happened and prevented any Medicine from remaining on the Stomach, & he could not overcome this, but by external Means applied to produce Sweat, that is to take off the Spasm of the extreme Vessels. During the Vomiting a large Quantity of Bile is thrown off from the Stomach, which has induced some people to consider this as the Cause of Intermittents. But this we shall now endeavour to account for; The further we go southward the greater Changes are made in the Bile, and Warm Seasons will

will also produce the same here, hence Cholera is produced. this is most frequent in Marshy Situations and it appears every Summer in the lower parts of this City: this must arise from the unhealthy situation of this part of the City from lying low and being much exposed to the Marshy Exhalations &c. Constriction takes place on the Surface which causes an accumulation of Blood in the larger Vessels of the Venous System and particularly of the Vena portarum; hence those of sedentary Lives are most subject to Congestions and Obstructions of the Viscera. Blood thus accumulated produces a more copious Secretion of Bile; by Vomiting the Biliary ducts are emulged but the Bile is only the Effect and not the Cause of the Disease. Thirdly, Delirium this may be said to be of two kinds, first that which arises in the Hot fit with Head ache and throbbing of the Temporal Arteries, this is occasioned by the increased Impetus of the Blood in the Vessels of the Head and is the Effect of Irritation and accompanies all violent Inflammatory Fevers. I have known persons relieved of a Delirium by raising the Head higher: secondly there is another Delirium which is not produced by Impetus but Debility of the Vessels of the Brain hence Congestions which produce Inflammation, particularly in the last Stage of Fevers; this we judge to be the Case from the dull and constant pain, wild look &c

sometimes

sometimes from the phrensy which takes place. But from Dissections of persons dying of this Complaint it appears that there is no Inflammation in the Brain. Dr. Cullen explains this by his Theory of diminished Energy and partial Collapse of the Brain, which is evidently hypothetical, for was this the Case Opium would be hurtful, whereas we find that Opium may be employed with advantage to take off the Delirium, till the Cause may be removed by proper Remedies. for this purpose pediluvia with a small Quantity of Wine have been found useful. The Opium by rendering the Brain insensible to the Stimulus of the Blood takes off Irritability, the others excite the Action of the Heart and Arteries. Thus the Irritation and Debility or Inflammatory & Nervous Causes are to be distinguished. I come now to give you a general Definition of Fever. Fevers are said to consist in an increase of Heat and a Quickness of the pulse, this is improper, as both these Symptoms may be produced without any Fever. I think it consists in an increased Action of the Heart and Arteries with a Lesion of the Animal Functions. We now proceed to speak of Inflammatory Fever by Cullen termed Synocha. This attacks robust persons suddenly

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without any previous Lassitude and is seldom produced by Co-
tagion but often by Cold. It begins with a Cold Fit, without Vo-
miting, and is of short Continuance, the frequent returns of Cold
with hot Flushings are not so ~~much~~ remarkable; the Hot Fit
arises with Redness of the Skin and Turgescence of the Vessels,
fulness and hardness of the pulse, pain in the Head, Backs &
larger Joints, Respiration is frequent but not difficult, some
degree of Anxiety, the Appetite is diminished, but not entirely
gone; there is a Nausea but seldom Vomiting, there is likewise
a Thirst with a Sense of Heat in the Fauces: the Belly is bound
and the Urine high coloured, it is generally of a Short duration
seldom continuing more than Seven days. The Remissions and
Exacerbations are scarce sensible, it terminates by a sensible
Evacuation of Urine or Sweat. The Cure depends upon Bleeding
and such Medicines as tend to moderate the Action of the Heart
and Arteries. I now proceed to enumerate the Symptoms of a
Nervous Fever or Typhus this is most frequent in Warm
Seasons and Climates, and arises from a foreign Matter in-
troduced into the Body called Miasmas; hence people of
relaxed Habits and those exposed to debilitating Causes
are most frequently attacked by it: It begins in the Eve-
ning with a Sense of Coldness in the Air, with a Slight
Degree of Chill, succeeded by Heat, this alternately happens
for two or three Nights, going off in the Morning, the pulse
is frequent but not full or Strong, the Strength and Tone
of

of the Animal Functions are diminished to a very great Degree, the Appetite is lost, there is a Nausea and Vomiting, Want of Sleep, Delirium, the Heat of the Body is moderate and unequal in different parts; in the Extremities scarce perceptible; the Belly is bound, the Urine is pale and without Sediment. The duration of this Species of Fever, is from two to three Weeks or more, terminating without any Sensible Crisis. The Symptoms just now mentioned plainly discover great debility. These are the most common Appearances of these two kinds of Fevers; but they are frequently varied by a Combination of another called Putrid Fever, the Synochus of Dr. Cullen. The Miasma or Contagion, which gives rise to the last, produces its Effects upon the Nerves, but when thus combined they act also upon the Fluids, by a Ferment which is capable of multiplying, as in the Small Pox, where a very small Quantity of Matter introduced on the point of a Lancet, is capable of producing an almost innumerable Quantity of pustules, which is only to be explained by the Analogy of Fermentation. In the Small Pox no Change is produced in the , but in the putrid Fever the Solids and Fluids are both affected. The Characteristic Symptoms of a putrid Fever are, that Blood drawn, does not coagulate at all,

or if does the Serum seperates very imperfectly from the red Globules: the Blood oozes spontaneously from various parts of the Body as the Nose, Ears and Eyes: it is spit up without any pneumonic Inflammation and is also discharged by Stool without any Symptoms of Dysentery; it is extravasated in the Tela mucosum forming petechia, Macula and Vibices. The Symptoms may be corroborated by others, as fœtid Breath Stools and Urine; the Fœtor of Blisters and a Cadaverous Smell of the Whole Body &c. The Vapour or Effluvia arising from putrid Animal Substances is the most deliterious Contagion and is highly sedative. We shall now treat of the Remote Causes of Fever, and these are foreign extraneous Substances, taken into the Body that prove hurtful as Miasmata or Contagion. Any Matter, floating in the Air, that is injurious to the Animal Functions is called Miasma. The Effluvia arising from a person sick, when communicated to another proves hurtful and are called Contagion. They both often cause Diseases. Miasmata are generally produced from marshy Grounds, and a certain degree of Heat Cold and Moisture do not produce Miasmata, neither can Heat alone; for in Warm Climates if the Season be dry no such Effects take place; neither are they generated by the action of Heat on Water only, but from putrid Vegetable Substances operated upon by Heat and Moisture. It is not

every

every kind of putrid animal filth that produces Miasmata, for Instance the City of Madrid which abounds therewith and where their Necessaries are above Ground, was not found to be affected thereby. Sir John Pringle accounts for it by supposing that there is a Volatile Salt produced and evaporated from the putrid Substances that purifies the Air. But whatever may be its Nature, it is more or less fatal in proportion as it is more or less confined; and more or less innocent in proportion as more or less diffused through the Atmosphere. These Marshy Effluvia always produce one kind of fever, viz, the Tertian, which sometimes degenerates into a Quartan; those will be in proportion to the Strength and Activity of the Miasmata and these in proportion to the distance from their Source. It appears from Authors who have written in different Climates, that Fevers in all other Countries are similar to what we experience in this, and produced by the same Cause. Next of Contagion; this arises from the Human Body and has been supposed to be universally diffused through the Air; but by later Observations it appears that this is not the Case, as it is found to attack those only that are near to its Source and is rendered quite harmless by Ventilation. This holds true with respect to the plague, which

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is so much dreaded, and from which people have supposed there was no escape but by flying to a great distance. A person of Credit has informed me that he slept in the same House with only a Wall eight feet high, (and open at the Top) between his Bed and one on which a person had died of the plague, and yet escaped. The Cause of the plague is in the Atmosphere and this does not arise very high. In the Levant which is a place of great Trade and where the plague often makes its Appearance, the Franks are preserved by shutting themselves up close. (The Christians in that Country are all called Franks.) By this and many other Instances it is found that persons living in a City infected with the plague may avoid the Contagion by shutting themselves up, so as to avoid all Communication with persons and places infected. If the Contagion was diffused through the Air this could not be the Case; but it is evident that it spreads a very little distance only. Its Operation or Method of Communication is to be accounted for in another Way. It remains concentrated and adheres to Garments, Furniture &c and may by that means be carried to any distance, and exert its poisonous Qualities for a very considerable time after, and is not easily removed by Ventilation. A Blanket that belonged to a person who died of the Small pox in England, was brought to America and retained a

Quantity

Quantity of the Effluvia sufficient to infect an Indian (who purchased it here) with the Small Pox. This shows the Manner of its Communication and its Source; but how it was generated we are as yet ignorant. But suppose it probable that it was produced by a Ferment, which and may be differently modified in different Diseases, and therefore not of that Variety that some have supposed. We have some specific Contagions always producing the Same Effects, as in the Small Pox and Measles. The Effluvia from the Human Body in putrid Fevers and Dysentery, by being suffered to remain unventilated, are therefore converted into Contagion: hence we conclude that Marsh & Human Effluvia are the chief Sources of Fevers. The Cure depends upon a Knowledge of the proximate Causes, but Preservation from its Attack upon the Remote Causes. Miasmata are the only remote Causes of Intermittents, and remitting Fevers and arise from Marsh Effluvia. But the Exhalations from healthy Bodies become noxious when not sufficiently ventilated; hence Continual and other Fevers are produced in all places where large Numbers of people are crowded together, whether in Jails, Hospitals or Ships; these shew great Symptoms of debility. Fever may be produced by other

Causes

 Causes, as Cold. To have a clear Idea of Cold we must suppose it to act as a Sedative, Stimulant and Tonic; but first of its sedative Effects. Heat you have been told is the chief Stimulus to the Animal Body and the principal Cause of Motion, from the opposite Nature of Cold you will expect contrary Effects. 2nd. A Moderate degree of Cold acts as a Stimulus to the Sanguiferous System, with an increased Determination of Blood to the Part to which it is applied. 3rd. Cold acts on Inanimate Substances by condensing them, hence proves Astringent and Tonic; in consequence of this last property, at the same time that it stimulates the Heart & Arteries, it gives Tone to the Arterial System, hence a Phlogistic Diathesis is produced. The Effects of Cold, when applied to the Human Body, may with propriety be divided into three Heads: first, Cold by inducing an Inflammatory diathesis, occasions Inflammation and Topical Affections, common in Winter. Second, It produces Fever by its Astringent Quality, Obstructing perspiration and determining the Fluids to the internal parts, hence Obstructions and Inflammations of the Bronchia producing Catarrh, and in the Lungs producing Cough. Third. Cold is often the exciting Cause where Contagion is already introduced into the Body, producing Nervous and putrid Fevers which in the Beginning appear like

Inflammatory

Inflammatory Fevers. Of other remote Causes, under these we rank 1st Excess in Venery, the debilitating Effects of which are well known, and it is often observed that new married people are more subject to Contagion and Fevers than others. 2nd Intemperance in drinking Strong Liquors, these tho' at first Stimulating, yet when their Effects are over leave the Body much debilitated. 3rd Any great Evacuation or Fatigue and particularly in a State of Convalescence. Fear or Grief; all these are reckoned concurring Causes giving Strength to Contagion. But above all Fear weakens the System by diminishing the Action of the Heart and Arteries and sometimes to so great a Degree as to produce sudden death, but commonly acts as a powerful Cause, concurring with Contagion to produce Fevers: hence those liable to Fear are most subject to the Attacks of Contagious Diseases. Having thus treated of the Occasional & proximate Causes of Fever we shall now mention the Remote Causes as the presence of Aliment in the Stomach and the particular State of that Organ. All our Food when first taken into the Stomach acts more or less as a Stimulus and produces a frequency of pulse and some degree of Fever. This differs in

proportion

proportion to the different Quality and Quantity of the Food taken in. We have Constituted three general Causes of Fever, Miasmata, Contagion & Cold; there are other exciting & occasional Causes, such as Fear &c which we have mentioned before and are not sufficient to produce Fever but when combined with some other of the general Causes. Fevers arising from Miasmata and Cold may take place in Cold Countries, and of this we have several Instances. We come now to speak of the prognosis of Fevers, and we must here observe that every Cause of Fever has a tendency to hurt and destroy the System, and in every Fever there are certain Motions excited to obviate that tendency, these are called the Vis Medicatrix Naturæ. There are therefore in every Fever, both morbid and salutary Motions; but the Salutary Efforts of Nature are involved in so much Obscurity, that they cannot be explained by their Symptoms, so clearly as to be applied to the establishing of Prognostics; and this I think may be done by making the prevalence of the Symptoms which shew the tendency to Death in Fevers the lines to form our Judgement by. The Causes of Death in general are either direct or indirect. The first are those which directly attack and destroy the Vital principle, as lodged in the Nervous System or destroy the Organs immediately connected with it. The Second or indirect

Causes

Causes are such as intercept such Functions as are necessary to the Circulation of the Blood and thereby necessary to the due Continuance and support of the Vital principle. The Effects of the general Causes may arise either from Irritation or poison; when from Irritation it produces such violent and repeated Excitements of the Heart and Arteries as tend to destroy the Vital power itself, or by their Violence destroy the Organization of the Brain; or the part more immediately necessary to the Circulation of the Blood. When from poison, this is a power capable of destroying the Vital principle and which produces great debility; this poison may be either the Miasmata or Contagion that was the remote Cause of the Fever, or it may be a putrid Matter generated in the Course of the Fever. In both Cases the Operation of such a power appears either as acting chiefly on the Nervous System, inducing the Symptoms of debility, or as acting on the Sanguiferous System, there producing a putrescent State in it and in the Fluids derived from it. From all this we think Symptoms shewing the tendency to Death in Fevers may be divided into three Heads, Viz, Irritation or Stimulant powers, Debility or Sedative powers and a tendency to putrefaction or Septic powers. The two last may be called direct Causes. The first occasioning an increased Impetus may be ranked under the Head of Indirect Causes. The Symptoms that express an Excess of

26. Excess of Stimulant or Irritating Powers are the increased Force Hardness and Frequency of the pulse; increased Heat of the Body and all those Symptoms which are the marks of a general Inflammatory Diathesis and a Strong Spasm appearing in the Suppression of Excretions. There is a difference between a full and frequent pulse: in general by a quick pulse we mean those that have a particular jerk against the Finger and are distinct and regular; By the latter (or frequent pulse) we mean those that are faster than usual but not distinct, nor regular. It is well known that the Frequency of the pulse is a relative Term, and when we speak of this Frequency we must have in our View, the Constitution, Temperament, age &c of the patient. In general we may lay it down as a general rule that the Usual Frequency of the pulse in Health is from 60 to 80 Strokes in a Minute; in Fever commonly from 80 to 120, above this is very dangerous; if of long Continuance the patient will soon expire. This is not a general rule but we may lay it down as a fatal Symptom. This not only happens from excess of Irritation, but from debility, as in deliquium animi. In Case of a full and strong pulse, the Strength and Tone of the Heart is indicated, and that the Contents are entirely discharged every Systole. When full, quick and strong, it denotes the Excess of Stimulant power but is not dangerous unless in Affections of the Brain, as Coma and other Symptoms of

of Apoplexy. A full pulse without being strong if it can be distinguished is a favourable Symptom, shewing a Solution of Spasm, except in Lethargic or Soporose Cases, where neither the Fulness nor Slowness is to be depended upon. The Size of the pulse in the Wrist is different in different persons and varies in the different Wrists of the same persons. When we attempt therefore to feel pulses, we must feel both Wrists, as the Artery in one Wrist may lay more superficial than the Artery in the other. We must also in order to judge of the pulse, consider the Situation, Size and Tension of the Arteries. By a hard pulse we mean that Hardness that exceeds the proportional strength of the Arteries. This is a Symptom of Inflammation but it is difficult to be distinguished and requires a Consideration of the other Signs of Tension or Debility in the System. This Hardness of pulse is owing to Tension and therefore the pulse is observed to rise, when the Tension is removed by bleeding. We are also to judge of the Regularity of the pulse by the intervals of the Strokes, being more or less equal and from the similarity of the Strokes to one another as to Strength. When the pulse intermits in Fevers it is owing to Irritation, the Stimulus being unequally applied: and the Irregularity is owing to Debility. From the Doctrine of the pulse I have just mentioned, you may learn the Doctrine of Inflammation. Our Judgement of Fever is to be taken

from

from a Combination of the State of the pulse and other Symptoms. By a quick, hard, strong and full pulse we judge of the presence of Inflammation owing to an excess of Irritation and the power and degree of Spasm. By the frequent, soft & small pulse we judge of the Degree of Debility and the moderate degree of Spasm. We are next to enquire into the Heat of the Body, which when increased is a Symptom of Inflammatory Diathesis; but the degree of this cannot be ascertained exactly but by a Thermometer, as the sense of Feeling to every One is not the same; or the heat may be seated more or less deep at one time than another. When the Heat of the Body is lessened it is a sign of debility. The increased action of the Heart and Arteries is to be judged of by the increased Heat of the Body, as when on feeling the pulse a sense of Heat is perceived like a Stroke of Heat, or as if the Heat was pointed to the Finger; when at the same time a less degree of Heat will be perceived by applying the whole Surface of the Hand to the Skin. Whenever the Heat of the Body is preternaturally increased, it is to be considered as owing to an increased action of the Heart and Arteries, arising from an Excess of Stimulant power; whereas little or no Heat shews the excess of a Sedative or debilitating power. I am now speaking of Febrile Heat known by a dryness of the Skin, Heat and some degree of Moisture; this Moisture is not always a Sign of Solution of Spasm but may be occa-

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sioned by the Violence of the Circulation, even while the Spasm continues. The Thirst and Dryness of the Tongue is also a common Symptom of fever and is owing to a Constriction on the Excretory ducts of the Salivary Glands to secrete the Mucus and Saliva. The Crust on the Tongue is owing to the thinner parts of the Saliva being exhaled while the thicker parts are lodged upon the Tongue & Teeth while the Heat and Exhalation are continued and the Secretion suppressed. By this we judge of the State of the Spasm; this Crust when dry changes its Colour becoming brown and sometimes black. Physicians have generally thought that a black Tongue was always a Sign of a putrid Fever, but this is not so generally the Case as has been supposed, but it particularly indicates the degree of Spasm; hence it is a favourable Symptom when this begins to give way to a moist & natural Appearance. The preternatural thirst is owing sometimes to Spasm, hence we observe it takes place in the Cold Stage of Intermittents; in the Hot stage Heat joined to the former Cause may increase it, and it may be considered as the Effect and Mark of the Stimulant power, and the degree of it to be in proportion to the Heat. Acrimony also produces Thirst which happens particularly in Cases of putridity; this Acrimony may be dissolved by plentiful

-ful dilution, hence Nature seems to guard against the Effect of so intense a Thirst, by giving the patient a Strong and con-
- stant desire for drinks. This may be considered as a Mark of putrescency in the Stomach. Another Mark also of the Degree of Spasm, is that the other Secretions are diminished, this is likewise a Sign of the Spasm in Inflammatory Fevers. In these the Urine is Scanty and high coloured. A dry bound Belly which commonly takes place in Fevers is generally considered as a mark of Stimulant Powers. Generally if Blood be crusted when drawn from a Vein it is a Sign of an Inflammatory Diathesis then prevailing in the System. I again repeat the Symptoms of Inflammation to be the following Viz a quick, frequent, Strong and hard pulse, dryness of the Skin and Tongue, high coloured Urine, great Thirst, a bound Belly and an inflammatory buffy Crust on the Blood. This may also be further discovered by the inflammatory Diathesis being general and not determined to any particular part whose Functions are necessary to Life, as the Brain Lungs and other important Viscera: or when not converted into to another disease is not dangerous; as in Rheumatism where the Inflammatory Diathesis is generally as great as in any other disease, but being determined to parts which are not immediately necessary to life, Nature will bear it for a great length of time. The Danger of Inflam-
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-matory Diathesis, consists in its being determined to parts whose functions are directly necessary to Life as to the Brain, Lungs &c. The Symptoms of which tho generally obvious are not always so. I shall therefore point out the most distinguishing, some of which will always take place. In the first place in Intermittents where the Cold continues long, there is a determination to the Viscera. In Inflammatory Diathesis there is a determination to the Brain. This in the former is owing to Spasm on the Surface occasioning an Accumulation of the Blood in the larger Vessels, and a slower return of the Venous Blood, particularly thro' the Liver and Spleen and hence a greater Secretion of Bile and an Obstruction in the Viscera ensues. In the latter it may arise from several Causes as the direct Course of the Vessels and Vicinity of the Heart may favour this determination by throwing an unusual Quantity of Blood into the Vessels of the Brain. The following Symptoms point out this determination: 1st A pulsation and Throbbing of the Temporal and Carotid Arteries; The Internal ~~xxxx~~ Carotids communicate with and run thro' the Os petrosum and it is owing to this that the hearing is oftentimes sometimes affected. The pulsation of the Temporal and Carotids

Carotids may be distinguished by the Touch of the Fingers but more particularly by the patient when he lays his head on a pillow. This is also a Mark of great distension in the Arteries. 2nd The Arteries which convey Blood to the Head are greater in Number in proportion than in any other part of the Body; hence it is that a redness and Turgescence of the Face is owing to an increased Impetus of the Blood in those Vessels of the Head, or to an Obstruction of the Venous Blood in its passage to the Heart, by a spasmodic Constriction of the Lungs obstructing the Circulation thro' that Organ and of Consequence preventing a return of the Blood by the Veins from the Head. 3rd The redness often appears in the Coats of the Eyes particularly the Adnata; when this happens without Signs of Obstruction in the passage of the Blood thro' the Lungs it points out the increased determination to the Brain. To these Symptoms are joined a Head ach, Watching and Want of Sleep which shews the increased Impetus of the Blood & determination to the Brain and is often attended with phrenitic delirium, with an increased Sensibility to both Light and Noise. The Next constitutes the most dangerous and common determination of the phlogistic diathesis, Viz to the Lungs. This is known by a disagreeable Sensation of the praecordia, by anxiety in

in the Thorax and a Difficulty of Breathing; these are to be referred to the difficulty of the passage of the Blood thro' the Lungs and denotes some degree of Obstruction in those Organs. The difficulty of Respiration depends upon the Sense of Anxiety, this we endeavour to obviate by repeated and full Inspirations. The determination to the Lungs is known and evident by a pain in the Side in pleurisy; and under the Sternum in peripneumony with laborious Respiration, which is increased by a recumbent posture; this is owing to the Abdominal Viscera rising higher in this posture, and opposing the Contraction of the Diaphragm. A Cough is a Symptom of the Determination to the Lungs, this may be learned in some degree by the Appearance of the Countenance being generally red and turgid, this is owing to an Obstruction of the passage of the Blood thro' the Lungs, or to a preternatural Resistance it meets with hindering its return to the left Auricle of the Heart. A determination of the phlogistic Diathesis to the Abdominal Viscera may be known by a fulness and Tension of the Hypochondria, this shows an Accumulation of Blood in the Vena portæ & Cavæ. At the same time we do not suppose this Accumulation to extend to all parts of the Abdomen only

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shewing its Inflammatory Tendency. By the difficult Tra-
-mission of Blood thro' the Vena porta the Anxiety is felt in
the Praecordia, the Stomach also is liable to various Affect
from this Cause, as Vomiting which may be produced from
Inflammation of some of the Viscera of the Abdomen. Th
often happens in the Cold Stage of Intermittents and is ow
-ing to its Connection with the Surface of the Body whic
is affected with Spasm; so we also think it probable th
the Spasm induced by an Inflammation in any of the Neig
-bouring Viscera may have this Effect, especially as we fin
this to be the Case in an Inflammation of the Bladder. Th
distinctions are more obscure than those that point out
determination to the other parts as in the Brain and Lung
The Causes of an Inflammatory Diathesis are first Cold
-ness of the Season and Climate; secondly Plethora, hence
Young, Vigorous and plethoric are the most subject the
Inflampha. Diathesis. Its general Effects tend to destroy the most important Orga
either by Effusion, Suppuration or Gangrene. Thus mu
for the Appearance and Effects of Inflammatory Diathesis; we
come next to consider the Effects of Sedative powers upon
System. Miasmata and Contagion are the most common
Causes of Fever and are of a sedative Nature and possess
debilitating power. In the Plague Debility is one of the
first

first Symptoms, producing a Weaker action of the Heart and Arteries. Debility may be distinguished two Ways, first by its Effects on the Animal Functions, Secondly, by its acting as a putrefactive Ferment upon the Fluids. Of Debility and its Symptoms: First there is a Lassitude & an Aversion to Motion and an Uneasiness in exerting it. Secondly, As the Debility increases the patient is unable to sit up or be in any degree in an erect posture, he cannot even lying perform the necessary Motions, he cannot lie on the Side at all but only on the Back, when the fewest Muscles are in Action, but even here the action of some muscles is necessary to prevent his sliding down in the Bed. These are the usual Symptoms by which an excess of Debility may be known, but a more compendious Way is by examining the Appearance of the Countenance, and particularly of the Eye. When the Muscles of the Face are lax and flaccid, and the Action of the Eye is languid it is a sure Expression of great debility. This must be obvious to every one that will take the least notice of the Eye. Farther a tremor of the Hand on any Motion and particularly of the Tongue is a sign of great debility and often occurs as a Symptom of the Jail Fever. When the Eye is fixed or squints, when the Ball does not follow

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the action of the Eyelid; when the Eyelids are contracted with Spasm so as not to be shut in Sleep; when the Lower Jaw is affected with tremor and Contractions, these all show that there is a strong Spasm produced by debility. Convulsive Motions sometimes happen in the Tendons commonly called Subsultus Tendinum, and a gnashing of the Teeth called Stridor Dentium. These arise from the same Cause but are most common in Children and those of delicate Constitutions. Of the Effects of Debility on the Senses: The timid passions are the Effects of debility; the Confident and assuming are the Effects of Tone and Vigour in the System. Dreams are the delirium of our sleeping, and Delirium the Dreams of our waking Hours. Delirium is, when the patient being fully awake talks incoherently. In Delirium arising from the debility the patient is calm and placid, his thoughts are not turbulent or furious; but this is not always the Case for in the last Stage of a Nervous Fever, I have seen a Person in a phrenitic delirium: here I think the Brain was particularly affected, and I believe there to be always mortal Symptoms. An Involuntary discharge of Faces is owing to a total Obliteration of the Memory or Association of Ideas, for when Glysters are retained we know that it does not arise from a palsy of the Sphincter but from a loss of Sensation and owes it Cause to great debility

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or want of Energy in the Sensorium Commune. a loss of Hearing often attends Fevers but is not so dangerous a symptom as some have supposed but is I think more favourable than an increased Sensibility to Sounds. Insensibility of Thirst, loss of Sight, an Imperfect and false Vision are strong Indications of great debility in the Brain. Of the manner in which the Vital Functions are affected by debility: The Heart and Arteries are primarily affected hence proceeds a deliquium animi, Vertigo and dimness of Sight owing to the diminished Force of the Circulation. By the State of the pulse and Heat of the Body we judge of the degree of debility or Vigour in the Circulation: If there is a weak quick pulse, if the Heat is less than natural, we are sure that the debility is the Cause. A dry Tongue indicates Heat, a moist one indicates debility and is characteristic of a Nervous Fever. If no Blood appears in the Vessels of the Tunica Adnata of the Eye, if the Eyes and all the Features are sunk, with Cold colliquative Sweats, Coldness of the Extremities, and paleness of the Countenance, these indicate the last degree of debility and universal Relaxation. Of the Symptoms of Debility that occur in Respiration: among these are frequent and laborious Breathing; when this happens without increased Action in the Heart and Arteries, it must be owing to debility, particularly in

in the Muscles of Respiration: another Sign are constant involuntary Sighs. A Change of Voice is one of the first Symptoms of Sickness and debility. Of the Effects of Debility in the natural Functions and 1.st in the Stomach: This is affected with Anorexia, Loathing of Food, Nausea and Vomiting. I mentioned formerly the Connection there is between the Skin and the Stomach; this is owing to debility inducing Spasm on the Surface, and by the Food becoming putrid in the Stomach; but when neither of these Symptoms are present, we may suppose with propriety that debility is the Cause. Deglutition is among the natural Functions: If a difficulty of Swallowing happens without any manifest Cause, it is a sign of great debility: to which may be added the involuntary Relaxation of the Sphincters accompanied with an insensible discharge of their Contents. When this happens at Intervals it is owing to delirium. It is not a debility of the Functions only that is to determine our prognosis, but a Combination and Consideration of them all together and the manner in which they are affected. It is impossible here to lay down any certain Rules by which to judge of Life or death. If the Heart retains its power of emptying itself, it is a favourable Symptom; if as long as the pulse continues under 120 Strokes in a minute, unless a great debility has taken place, we may hope for a favourable Issue. We judge of the approach of Inflammation of the Brain at the same time that there is evident Marks of

of debility in the System, by a very great Sensibility to Light and Noise whilst other Irritations are not attended to. Topical Inflammation may happen without being universal, with increased Sensibility, not only of the part affected, but also of those immediately connected with it; as when many Vessels of the Adnata of the Eye, are filled and turgid with red Blood, while other parts of the Body appear to be deprived of their usual Supply. Other Symptoms of Topical Inflammation of the Brain, are a want of Sleep, constant Watching, Restlessness, Inquietude and Delirium; these all indicate a strong Irritation of the Brain. Irritation applied to any other parts is capable of producing similar Effects. You may remember that I constituted two kinds of Delirium viz, the Delirium arising from Irritation and the Delirium arising from debility; and these may be combined together. The Approach of Inflammation may be known, whenever so hidden, by a small, quick and hard pulse. The presence of Irritation may be known by the State of the Urine; which from a high Colour immediately changes & becomes pale & Colourless. Thus have I pointed out the presence of Irritation and debility, I come now to speak of the Symptoms that express the prevalency of the Septic or putrefactive power, it is known 1.st by a loathing of Animal Food; a nausea and longing for acids;

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 a great Thirst and a particular desire for acidulated drinks These are the Indications of the Vis Medicatrix and Conservatrix Nature. There is a disagreeable taste in the Mouth and a disagreeable Breath: these may be owing to carious Teeth, diseased Lungs, or what is more common, to something putrid in the Stomach which arises in nidorous Belching There is also a discharge of fœtid Stools; These are Symptoms of putrescency and are accompanied with constant Nausea and Vomiting, which arises from debility. The only putrefaction that can take place in the Human Body is that of the alvine Fæces. We judge of the tendency to putrefaction also by the following viz that the Blood when drawn will not coagulate owing to its being dissolved by that great Tendency to putridity; but this is sometimes fallacious, for in an Inflammatory Fever it will not sometimes coagulate; and sometimes from certain accidental Causes in putrid Fevers, it will show an Inflammatory Crust. The Concretions and Secretions depend upon the state of the Coagulable Lymph; when this is so changed that no Separation takes place but all unites into an uniform Mass without Tominess, or when an imperfect Separation takes place, we may conclude from all these that there is a Tendency towards putrefaction, particularly when by gentle Agitation the texture of the Blood is broken down. Large Menstruation may be a Symptom of the putrescency

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of the Fluids as the Blood thereby is rendered more fluid. An Evacuation of Blood by the Urinary passages is a frequent Symptom of putrescency in both Sexes. Hæmorrhages in putrid diseases are not confined to any particular part of the Body. The Atra Bilis of Hippocrates is Blood that has made its passage to the upper part of the Intestines and remaining there some time undergoes very great Changes and is afterwards discharged and is generally supposed to be a fatal Symptom. In the worst kind of putrid Fevers the Blood is sometimes discharged from the Nose, Eyes, Ears and even thro' the pores of the Skin, and that without any increased impetus or fulness. The Blood in these Fevers is not always discharged thro' these Outlets but is effused into the Cellular Membrane; it may be putrescent while circulating but when effused produces a Sphacelus or putrefaction forming Petechiæ, Maculæ and Vibices. Other Signs of putrescency are very high coloured and fœtid Urine, but this is fallacious. Remarkable fœtor of the Sweat is more certain, with the fœtor of Blisters and a Cadaverous Smell of the whole Body; these commonly occur in the last Stage of the disease. From all these combined our Judgement of Fever is to be formed. We are next to enter into the Method of Cure in Fevers. I shall be as minute as possible and take particular Notice of the least Circumstances, for certainly

tainly where the Health and Life of the patient is in danger we ought to take particular Notice of the very least Circumst that may occur. Different plans and Modes have been proposed by different Physicians. Some are for following Nature trusting to her Indications alone, but this has only served to introduce a feeble Practice. The principal Cause of Fever is debility and in that Case Nature is not able to relieve herself, neither are her ~~Indications~~ Exertions always proper; However they are not to be disregarded but a Medium is to be observe the Method of Cure is to be adapted to the Causes of Fever which we found to be three, viz. a Stimulant, Sedative, and Septic power. To take off an Excess of these is to be our first Indication in the Cure; and first to remove the Exc of Stimulant Power. This is to be done by those means wh diminish the Action of the Heart and Arteries, and this agai is to be effected three Ways, first by guarding against Ir ritation; Second to make use of certain Refrigerants or Sedatives; third, by the use of such means as produce a general Relaxation of the Solids. We are first to treat of the avoiding Irritation which properly comes under this Head and for avoiding it we must avoid all those Causes of it th occur in the ordinary Course of Life and moderate those th are unavoidable. This forms what is called the Antiphlogi tic Regimen. Under this Title are comprehended all th

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Medicines that are used in Inflammatory Fevers, as Bleeding, purging &c. But it is improper to extend it so far; because removing the Excess of Irritation is necessary in all Fevers altho arising from debility which is seldom cured by direct Stimuli. The Antiphlogistic Regimen consists therefore in avoiding every exciting Affection or Irritation both External and Internal that act as Stimulants upon the Body. First every uneasy Sensation is to be avoided whether to the Taste or Smell; secondly the Stronger Scents and Odours are to be avoided; thirdly, all Light and hearing and seeing Objects that the patient is unaccustomed to are to be avoided, and enjoying darkness and Silence which is the first part of our Regimen in Fevers. We are to avoid every Object or Expression that excites Thought, and as the person will undoubtedly be endeavouring to see and talk we may here gratify them in some good measure by presenting a light Variety of pleasing Objects, which requires no particular Attention. These may perhaps appear trifling Circumstances, but it will undoubtedly be of Benefit to you in practice. Our Intellectual Faculties may be likewise affected by Irritation, therefore every thing that tends to disturb the passions is to be avoided, except in the Case of Delirium arising from debility this begins with Confusion of Thoughts and seems to be owing to the want of Impressions, hence introducing Light and presenting the

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Mind with accustomed Objects or addressing the person in a familiar Style dispels the Confusion and restores the Ideas at least for a Time to their usual Regularity. There are two other Impressions which are unavoidable, these are Heat and Cold, by this I mean the Impression of the surrounding atmosphere and first of Cold: In the beginning of all Fevers the application of Cold increases the Spasm and often is the principal concurring Cause with Miasmata in producing Fever. When therefore any horror or Shivering remains Cold Air is to be avoided but when the Hot Fit comes on Cold may be admitted in Moderation as ~~the~~ Heat is the Stimulus then to be avoided. Heat is the fundamental Stimulus applied to our Bodies and is essential to Motion in the Animal Machine and in an healthy State is always present to a certain degree and is always a general Stimulus to the System. The Animal Oeconomy is possessed of a power of generating Heat, but it always has a Relation to the State of the Surrounding Atmosphere, therefore the Heat of the Body will be in a Ratio compounded of the ~~Heat~~ generating powers within and that of the Atmosphere without state of the which will be greater in Warm Climates but not in proportion to the increased Heat of the Climate, for as the Heat of the Atmosphere is greater the generating power of Heat in the System is less. In the hot Stage of Fever therefore the Cold that before was pernicious

pernicious may be now salutary. The generating power will be increased as the Cloathing is more thick and warm & capable of confining the Vapour. The application of Heat therefore in Fever whether from the Fire, Atmosphere or that produced by Bed Cloaths may prove Stimulant and increase the Disease. The avoiding of Heat is a Matter of Consequence but there are two Exceptions to this rule viz the Warm Bath and warm Fomentation, these relax the Skin and determine to the Surface and thereby produce a Sweat which obviates the stimulant Effects of the Heat. In general Heat is to be avoided and its Increase prevented (if above 62 degrees) by the application of Cold, so as to lessen the usual Heat of the Atmosphere of the Room below what is comfortable in Health. The Application of Cold Air in the Small pox, and the Cold Bath in putrid Fevers have been found safe and useful; but how far it may be applied to other Fevers is not determined with Accuracy. We have now mentioned those Causes that produce Irritation on the Senses, we shall now in the second place mention those Irritations that arise from Motion. Every Motion is a Stimulus to the Body, and this Stimulus will be in proportion to the Number of Muscles which are brought into Action and the length of its Continuance. The longer Muscles are kept in Action the greater will be the Stimulus pro-

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produced. To avoid this, the Body is to be laid in a horizonta
position. Sydenham advises the patient to be taken out of Be
every day, and as often as he can to avoid the Heat of it. In
the Beginning of Inflammatory Fevers this may be of Service
but in Nervous Fevers arising from debility the Stimulus of
Motion is of worse Consequence than the heat of the Bed. These
come on slowly and for some days do not confine the patient t
his Bed, and they generally prove most fatal to those wh
have kept up the longest, therefore the patient should be ke
in Bed and as much at rest as possible. There is a Motion
of a small part of the Body which nevertheless proves a ve
great Stimulus, viz. Speaking; this increases respiration qu
-ens the Circulation thro' the Lungs and determines the Bl
in greater Quantities to the left Auricle and Ventricle of the
Heart and increases the Heat of the Body; It also indu
Thought therefore Silence should be enjoined. Thirdly, Ir
-tation is occasioned by Aliment. By this I mean Aliment in gene
which by the Exercise of digestion upon it, always proves a Stimulu
increases the Heat and excites a degree of Fever with an increa
pulse; therefore it is best to abstain from Food, for the first
two or three days, unless there be signs of debility, or a Natu
-ral Appetite for Food. If this is the Case, the uneasy Sens
-tion arising from Abstinence might overbalance the Stim
lus of the Food, therefore it ought to be gratified in sma

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Quantities. The Quality of the Aliment should also be attended to; it is stimulant in proportion to its Alkalescency & therefore Animal Food is more stimulant than Vegetable. The Stimulus also depends upon the degree of Solubility & perspirability of the Aliment; the Stimulus of digestion will also ~~will also~~ be greater or less in that proportion, therefore, although we would not enjoin total Abstinence, yet we should carefully avoid all stimulating Food & employ such Vegetables as are of the easiest Solubility and particularly the Farinaceous prepared and given in a liquid Form. These are often insipid to the Taste and require Condiments to be added to render them palatable. The most proper for this purpose are Fruits as Raisins, Currants &c as being the least Stimulant. Here I had chiefly in View the Continual Fever, for in Intermittents the Stimulus prevails only during the paroxysm: Nourishment is to be allowed here whenever the Appetite craves it during the Interval. Of drinks employed in Fevers; here I shall only consider the stimulant Quality of drinks. On this account Wine, Spirits and Fermented Liquors are forbid except where Custom has rendered them habitual; but this is rare. The moderate Use of Fermented Liquors is notwithstanding less stimulant

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than alcalescent Food. A Glass of Wine is less stimulant than ℥j of Beef- Wine therefore is better than Flesh. In treating of Fermented Liquors we have their Stimulus only in view and in general the most mild Liquors are to be preferred. There is one Circumstance to be attended to with respect to drinks which is that the Stimulus of Thirst is also great upon the Body, so that the patient desires large Quantities of drink. The Antients were as rigorous in abstaining from drink as they were from Food; yet altho we would wish to gratify the Thirst with drink, it cannot be safe in such Quantities, as would undoubtedly prove stimulant and thereby increase the Force of the Circulation. Hence small & repeated draughts of suitable drinks should be taken. In Inflammatory Fevers hot drinks are dangerous and drinks moderately tepid are most proper. In this Country an Inflammatory State is the most common in the Beginning of Fevers and we have very universally got into the practice of giving tepid drinks to our patients; but in Nervous and other Low Fevers the drink should be entirely Cold. There is another kind of Irritation which arises from Crudities in the Stomach and from a Retention of the Faces in the Intestines. And here I shall observe that we have Fevers arising sometimes from these Causes only; therefore they ought to be removed. This may be done by Emetics, Purges and the frequent Use of Emollient Glysters to take off this Irritation.

While

While a Spasm subsists on the Extremities and throughout the System, the Action of the Stomach in discharging its Contents is impeded: hence an Accumulation of Crude, indigested Matter remains in the Stomach. The Gastric Liquor and Bile are also regurgitated producing a considerable Stimulus and ought to be attended to. This explains the Use of Emetics and Diluents of which I shall have occasion to speak hereafter. The Contents of the Stomach are evacuated sooner or later in proportion to their Fluidity, and therefore diluents are necessary and useful; as well to render the Contents of the Stomach more fluid, as to remove the Stimulus arising from an increased Acrimony in the Fluids and to relax and open the several Excretories. Thus, I think, I have given you a full account of the Antiphlogistic Regimen and shall next proceed to describe the Methods necessary to take off the Excess of Stimulant power by diminishing the Action of the Heart and Arteries. This is to be done, first, by certain Sedative Powers; of this kind are all those Remedies called Refrigerants; & of this Class Acids are the most powerful. Acids have always been employed in Hemorrhagies and Inflammations; they remove thirst partly by the Refrigerant Quality diminishing the Heat, and partly by stimulating the Excretories of the Glands and thereby promoting the Secretion of Saliva and obviating Clammyness. Putrid Substances are apt to be generated in the Stomach and nothing

will

will correct this putrescency in the Stomach equal to Acids they being Antiseptic and determining to the Skin and Kidneys and are therefore to be one of the chief Medicines in the Cure of Fevers. Of these the Vitriolic and Vegetable are principally used, and on some accounts we prefer the latter; they form an intimate Mixture with our Fluids, are less concentrated and do not produce such sudden Effects as the fossil acids, but are more proper to produce a change in the Blood. They are also powerful Antiseptics and are useful in promoting the determination to the Skin and Urinary passages. For this purpose Vinegar Whey is an excellent drink. Acids and Accescent Fruits are the next to Glysters, they are of the greatest use in Inflammatory and putrid Fevers, are nourishing and laxative. The Sedative Salt of Homberg is deservedly neglected. The next order of Refrigerants are the Neutral Salts of which Nitre is the principal One: this is a powerful Refrigerant, but its manner of Operation is not so easily accounted for. Some have supposed it to operate by its Coldness, for Neutrals when dissolved in Water generate Cold, but as that Cold ceases soon after the Solution is finished, and as the Salts are generally exhibited in a dissolved State, their Refrigerant power in the Animal Body does not depend at all upon their power of generating Cold with Water. It is best given in Substance as its Effects are greatest when dissolving. If the Nitre acts as a Refrigerant, all Ammoniacal Salts are of the same Nature. The Regenerated

Tartar

Tartar and all the neutrals composed of the Vitriolic Acid have the same Effects only in a less degree except the Common Salt which, I have before observed to you, is one of the greatest Stimulants existing. The most common Effects of Neutral Salts are on the Stomach, determining the Fluids to the Surface and hence are diaphoretic and diuretic. They are not only refrigerating but antiseptic having the same Effects as Acids and generally prove laxative. After Glysters and acid Drinks, the next Step we take to obviate Costiveness in Fevers is with the neutral Salts. Both Acids and neutrals irritate the Lungs (agreed to) stimulate the Bronchia and excite Coughing, particularly in some Constitutions; this is more the Effect of the Muriatic Acid than any of the other Acids or Neutrals. A Gentleman observed that he could not use the least Quantity of Nitre not even two Grains in Glyster without its producing great pains in the Lungs. This therefore should make us cautious in the use of it in pulmonic Affections. There are Others that are observed to be refrigerant these are the saline preparations of Lead which are Astringent, Refrigerant and Sedative; they are also possessd of a narcotic Quality & induce palsies and the Colica pictonum. The Saccharum Saturni is a powerful Medicine and useful in many external diseases, but internally is a doubtful remedy if not a dangerous one.

I

 I sometime ago saw the evil Effects of the Sach. Saturn. ch. co produced excruciating pain; and death itself was the Consequence. It was given by a person unacquainted with physic. Such people may discover to you its good Effects and you will not have to answer for its bad ones. Iron and Copper have been recommended in Fevers but with their Effects here I am unacquainted. We have now to treat of the Third Head viz removing the Excess of Stimulant power, and this is to be done by diminishing the Tone of the Arterial System. This is owing to Tension, the removing of this Tension therefore is the principal Means of obviating the Effects of the Excess of Stimulant power, whether it be occasioned by the increased Quantity or Velocity of the Blood its Effects are the same. It is to be done two ways viz, by Bleeding and purging. Of Bleeding as employed to diminish the Excess of Stimulant power; this depends chiefly on the sudden relaxation that takes place during the Operation. The Effects of Bleeding will therefore be in proportion to the increased Tone existing in the Arterial System; for in some Cases of Hysteria where there is a preternatural Constriction of the Arteries, a small Quantity of Blood taken produces very considerable Effects. We are now to consider its Effects in removing the Tension of the Arterial System in diseases arising from debility in which Bleeding is not proper. In a pure Inflammatory Fever where an increased Action exists, Bleeding is the safest and most effectual

tual remedy; but in putrid or Nervous Fevers, even where there is considerable Inflammatory Symptoms, & where the sedative prevails you are not to use the Lancet, or at least with very great Caution. This must be determined by the following Considerations, first, from the State of the pulse when it is full hard and ~~tense~~ quick with a Turgescence of the Face and redness of the Eyes; if there be a determination to any particular part, and when fixed about the Thorax, and when accompanied with pain, Catarrh or Cough, these point out the presence of the Inflammatory diathesis and the necessity of plentiful Bleeding. But second, where these Symptoms are not so evident, and when the prevailing Epidemic is accompanied with Symptoms of debility, then we are to be governed by the following Symptoms, viz. by the fulness and Vigour of the patient's Constitution and the Habit of Body if Young and plethoric. There are also some Constitutions uncommonly Inflammatory, and neither a Head-ache, pain in the Limbs nor even uni-versal pains are to determine us when to use the Lancet. In some a Disposition to Hemorrhages as Bleeding at the Nose, and others that have been accustomed to this Operation, these bear Bleeding best and require it most. The more the patient has been accustomed to bleeding at the Nose the better will he bear the Operation. Third

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 we must consider the Climate: northern Inhabitants bear this much better than the Inhabitants of Southern Climates. The different Seasons of the Year are to be considered. The Spring and Winter most frequently produce Inflammatory Diseases, and Bleeding is therefore more proper in those Seasons, particularly in those disorders that are purely Inflammatory. Still however we should pay particular Attention to the prevailing Epidemic, that is, If I know that a Contagion prevails, I will therefore be cautious, even if the Symptoms at first appear inflammatory. This will be further determined by knowing the Nature of the remote Cause; if from Cold only Bleeding will be proper, but if Cold be only the occasional Cause concurring with Contagion we must be cautious. We must also consider the Type of the disease if it is an Intermittent or Remittent particularly in Autumn these do not bear or require Bleeding as freely as continued and will therefore make us cautious in the Use of the Lancet. We are also to be Determined by the Time the disease has continued: at first the Fever generally appears Inflammatory here in the Beginning Bleeding may be used, but in the latter Stages is seldom necessary or proper. Bleeding is most effectual when employed early in the Disease. When there is no Topical Inflammation our difficulty with respect to this Operation is increased. In Inflammatory Fevers where the

Symptom

Symptoms in the Beginning are not very considerable yet sometimes increase here Bleeding may be used with Safety; but whenever the disease is advanced the more Caution is necessary. With respect to the Repetition; if the pulse is smaller than we should expect in a person of equal Vigour and at that time of Life, If by the first bleeding it is raised, if there be an inflammatory appearance in the Blood, then it may be repeated with Safety and Advantage if the Symptoms require its use. The Inflammatory Crust commonly taken notice of as a Criterion, being absent does not determine the Absence of the Inflammatory Diathesis; because this Appearance may be easily altered by certain Circumstances in the manner of its being drawn; and further we know that this Appearance often takes place in the Beginning of Nervous Fevers and yet Bleeding would be improper, at least a Repetition would be highly so. Therefore we are not to judge from the Appearance of the Symptoms seperately but from a Combination of them. In this Respect there is a particular difficulty in Cases of determination to the Brain; in the advanced State of Nervous Fevers where no Irritation not even a little Wine can be taken without Injury; as this determination does not arise

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from a general phlogistic diathesis of the System so general Bleedings would be useless and injurious. We are therefore led to this Conclusion that topical Bleeding is only to be used. this is found to be more useful than pounds taken from the Arm. I have seen an Inflammation of the Eyes which was purely topical removed by scarifying the upper Eyelid. Leaches applied near the Eye or a small Scarification will have more Effect than two pounds of Blood drawn from the Arm. Thus topical Bleeding is more useful in an Inflammation of the Brain than in a determination to the Lungs, but may also be useful in the latter Case. In Intermittents Bleeding is not to be performed during the Cold Stage; in Continual Fevers there is sometimes a Shivering and Blushing alternately for several days, and altho' the Accessions of the different paroxysms of a Continued Fever are with difficulty distinguished, yet some degree of Exacerbation is generally observed to occur once within every twenty four hours therefore I would be cautious of performing the Operation of Blood letting during the Accession or Cold Stage. as the sudden Relaxation of the Tone of the Arterial System depends upon the largeness of the Quantity taken in a given time, this points out the Necessity of drawing it from a large Orifice. Eight Ounces taken in one minute will produce a greater Relaxation than twelve Ounces taken in two minutes. Every Irritation is to be avoided during the discharge of the Blood, therefore the Patient should not be in a sitting Posture as this position requires

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the Action of a Number of Muscles and these by their action tend to support the Tension. No person would attempt to bleed another whilst walking about nor yet in an erect posture and the recumbent or Horizontal as the most relaxed position is to be preferred. We should not bleed while the Irritation of a Blister is present for whilst the Blister is irritating the Bleeding will have little Effect; it sh^d therefore be performed either before or after. Other Means of diminishing the Excess of Stimulant power is by purging. The Hardness and Retention of the Faces are owing in a great measure to a Spasmodic Constriction of the Excretory Vessels of the Intestines, these Vessels usually secreting a Fluid to soften the Faces and lubricate the passage thereby to render their Expulsion easy. But this Excretion being now suspended a hardness and Retention of the Faces is the Consequence. This Obstruction is to be removed by the Use of mild purgatives and Glysters where warm Water alone is sufficient oftentimes and is always of Service. Obviating the Constriction of the extreme Vessels in all parts of the Body is an Object of great Importance in the Cure of Fevers. This may be done without increasing the Evacuation by Stool and therefore falls under this Head. Drawing off the Contents of the Intestines may diminish the Quantity of the Fluids independant of the Evacuation by Stool. This is done by the derivation of the Fluids in larger Quantities than usual to the Intestines. Doing this suddenly, is therefore a very considerable Means of

diminishing

diminishing the Tension of the Arterial System. But you are to observe that the derivation made by purgatives is more slow and gradual than that made by Bleeding, and that the Relaxation is not so great in proportion to the Quantity of Fluids discharged; upon the same principle that Blood drawn from a small Orifice will not relax the System equal to the same Quantity drawn from a larger Orifice; and Leaches will not have the same Effect as Bleeding. We must also observe that every discharge by Stool tends to diminish the Strength and destroy the Equilibrium between the Surface and Bowels. The Operation of purgatives is to be considered in another View, Viz, that there is a certain Balance between the External and internal parts, & therefore an increased Derivation of Fluids to the Bowells will necessarily diminish that to the Skin. We are also to consider that many purgatives are possessed of a Stimulating Quality, and that this Stimulus is easily communicated to the whole System. Therefore from those several Considerations the Cautions necessary in the use of purgatives will be obvious. Their Stimulus will be avoided by the Use of Neutral Salts such as Glauber's or Epsom Salts. purgatives in the Beginnings of Fevers may be proper to diminish the Tone of the Arterial System in vigorous Constitutions but is not equal to Bleeding. In the last Stage they are hurtful but when there is a Constriction of the Intestines and Faces become copious from being retained; when from the State of the Stomach we know that they have become acrid, & the Bile is thrown in larger Quantities into the Intestines purgatives are necessary. Another is when Congestions form

formed in the Abdomen and considerable determination to the Viscera takes place these are to be removed by purgatives such as tend to open the Excretories, prevent the Accumulation in the Vena portarum and relieve the Spleen. Therefore in Bilious and Autumnal diseases as they are generally of the putrid kind, I have no doubt but Evacuations by Stool will have a good tendency particularly as Evacuation by Stool is the most natural for the Bile. The Contents of the Intestines being more liable to putrefaction than any part of our Fluids mild Laxatives are therefore proper in putrid Fevers but must not be continued or repeated so as to waste the Patients Strength.

Having thus finished the use of purging in Fevers, I now go on to consider other Means made use of Fevers. The increased Action of the Heart and Arteries may be diminished by means of such remedies as produce a general Relaxation of the Solids. This is to be obtained only by Warm Bathing, this acts on the Simple Fibre, but its most considerable Effects are on the moving Fibre or Solida viva. The Warm Bath therefore as a powerful Antispasmodic, which we shall have an Opportunity of mentioning. Of these Medicines that are employed to relax Spasm, by determining a greater proportion of Fluids to the Surface are 1st. Diluents: these are principally Water, by plentiful dilution the extreme Vessels are filled their Reaction restored and the Spasm overcome. Fevers are therefore sometimes entirely cured by Diluent, this is illustrated by the Dieta aquea employed in Italy, France and other Countries of Europe. Their Method is after the Prima Via are evacuated

 cuating to make the patient drink as much as he can. Senac an eminent Physician in France, highly recommended the Diota aquea: he makes mention of one young person and an Old one who was cured by this Method: he imagines Warm Water to be better than Cold Water, but in the Summer Cold Water may be used. Warm Water is used by some and Cold by Others. The Italians make use of the Cold, but I think in general it should be a little warm, except in Intermittents, Nervous or putrid Fevers where the Cold Water is to be preferred; but in all Inflammatory Fevers it requires great Caution in the exhibiting it. The particular Use of Cold Water we shall soon have an Opportunity of mentioning. We come now to speak of the Neutral Salts as the next Class of Remedies used to determine the Fluids to the Surface, these are in Fact certain in this Intention and given in the Cold Fit of Intermittents shorten the paroxysm and remove Vomiting. These have a power of determining to the Surface by their immediate Action on the Stomach; for this purpose the Saline draughts have been used and the common Sal ammon. Saline draughts are of service in Vomitings and in the Cold Fit of Intermittents these are not certain in relieving the Vomiting but as they have a power of determining to the Surface may produce a more perfect Solution of the Spasm. But there are others which seem to be more powerful. The Saline draught is but a Feeble Remedy; when used it should be given in the Accession of the paroxysm and in larger doses. We shall however make a few Remarks on the general and different kinds of Neutrals employed for this purpose. 1st The saline

Draug

Draught prepared of Lemon Juice and the Salt of Tartar, but that prepared with the Volatile Alkali is more powerful. There is also the Spirit of Mindererus formed of the Vegetable acid and Volatile Alkali. It is of little Service in the Quantity commonly given and has even been given in the Quantity of half a pound in an Hour without having any Sensible Effects. Nitre has been chiefly employed as a Refrigerant, but in large Quantities is Diaphoretic. It affords us a useful and agreeable drink in Inflammatory Fevers, when prepared in the following manner viz. take of Nitric ℥ij, Acetum ℥ij, Water ℥iv & Sugar ℥ij: this is very agreeable to the Palate and Stomach. The next Class of Remedies employed to determine to the Surface are Sudorifics. The Use of these has been much disputed by Physicians. Sweating at the seventh Fit of a Tertian often proves a Cure, but what this depends upon we are yet ignorant of, for when Critical we do not discover any Critical Evacuation; all that we shall determine with regard to Sweating is, that whenever we produce a Sweat by heating Medicines given internally, or by means of external Remedies, we may depend on its being hurtful: — there is one Exception to this Rule, viz. that of Warm Bathing. It is therefore necessary that we should be fixed in some manner in knowing how to manage them. In Intermittents there is an Especial Manner of employing Sweats so as to prevent the Accession; but this often turns Intermittents into Remittents or Continual Fevers. We go on to consider the Objections against the practice of Sweating and the

Cases

Cases where it is improper. First, Where it is forced by Inflammatory and Stimulating Medicines. Second, When it is excited by Heat externally applied, as the Heat of Bed Cloaths. We know that the Sweat is injurious by the following Symptoms; viz, If while the Sweating is continued, the Heat increases, the pulse grows harder, the Head-ache continues or is increased; if the Sweat is clammy, not fluid; if it is partial only appearing on the Head, Face and Breast: in these Cases Sweating instead of removing has a tendency to increase the Spasm. If the Spasm does not yield we may expect some Topical Inflammation to take place, by occasioning thereby a determination to the Head, Lungs or Abdominal Viscera, and therefore ought to be avoided. I shall now mention in what Cases we may make Use of Warm Bathing. 1st When the Approach of a Fever can be percieved as in the Case of Intermittents in the Cold Fit, sweating before the Accession is useful and should be supported till the Fit is over, or untill the return of the next paroxysm. Continual Fevers may be prevented by these Means. The Jail and Hospital Fevers may easily be known and in the Beginning of these Sweating is useful. In the 2nd place, when a Continued Fever is just come on we may radically cure it by Sweating properly conducted as in the plague. It must be used in the Beginning of the Disease, or else we increase the Fever. In the advanced Stage it is not so successful and this Rule for obviating Fever particularly applies to Inflammatory Fevers. The Inflammatory Fevers of this Country are often

often accompanied with a spontaneous Sweating, but it does not bear increasing. If the pulse becomes softer and fuller, not harder or Quicker, Sweating may be continued. We are however in this to observe what I have before told you that if the pulse is hard and full and the Head Ache and delirium increase it will then if continued prove fatal. After proper Bleeding, Sweating may be employed for Rheumatism and often effects a Cure. In those Intermittents where there are Abdominal Congestions, Sweating by determining to the Surface may be useful; especially if accompanied with a Laxative to prevent Topical Inflammation. I have thus from Facts mentioned where Sweating is serviceable, I shall now go on to consider the method of exciting it. The gentle Stimuli that may take place I shall have occasion to mention bye and bye. With regard to the Method of Sweating, it should be done with as little Stimulus as possible, and by the most gentle Methods such as warm Bathing and Fomentations; here is some Relaxation to compensate for the Stimulus; but no increased Quantity of Bed Cloaths (except on the Feet) or other external Stimulus should be applied. If the pulse does not become hard, but continues full and soft it may still be encouraged. The plague is to be cured in the same manner, by the same gentle methods of exciting Sweat. If Sweating is deemed necessary, it must be continued for a proper length of Time.+ Dr Chalmers very properly confined his patients in Bed for 48 hours, but it is difficult to

+ Dr Chalmers.

 to persuade your patient to confine himself so long. The 3rd Method is that if we attempt Sweating in an Intermittent, it should not be used on the intermediate days, but on the day and previous to the Accession of the paroxysm, and should be continued till the next Accession. Dr. Clark a late Eminent practitioner at Edinburgh was adopted this Method, but found it very difficult to induce his patients to continue a Sweat so long. In Intermittents altho' the Sweating be copious, & the paroxysm is removed yet a return is not prevented. The 4th direction in the Conduct of Sweating is to make it universal and to endeavour to bring it to the Feet as quick as possible. A Fifth direction is taken from the last by observing that all interrupted or partial Sweats tend to increase the Fever. We are therefore to take Care that no Cold be admitted while under the Sweat, neither Air nor any Cold applications. Sweating should never be attempted in Linnen if it cannot be avoided it must be changed frequently to obviate that dampness Linnen cannot fail to produce, whether Bed or Body Linnen. Much danger has been apprehended from changing Linnen in a Fever, but this is groundless as it may be done with Safety even in Sweats provided the fresh Linnen be thoroughly aired and dryed. But what is far preferable to Linnen is Woolen, hence whenever you sweat your patient put on Woolen Blankets & a Woolen Shirt - this will prevent the patients taking Cold. After Sweating is excited the Cloaths should be only

sufficient

sufficient to keep the patient comfortable. I am in the last place now to mention the Medicines employed to excite Sweating, and here we must observe that the patient is to be covered so as to confine his own Effluvia. Warm Water is sufficient for the purpose of Sweating, but something is to be added to render it more grateful; as Sage, Sassafras or any other kind of Tea. But the best addition is Wine, particularly Wine Whey. Vinegar Whey may be used also and may be employed if the Wine Whey contains too great a degree of Stimulus. If these fail, Medicines must be employed; of these the most certain is Opium. There is no such a powerful Antispasmodic as Opium: it acts by relaxing the Excretories and stimulating the Heart and Arteries. The Next are Neutral Salts: these have little Stimulus & particularly determine to the Surface. A due proportion of the Antimonial preparations, or Ipecacuanha, with the Neutral Salts form an Excellent diaphoretic Medicine. Cold Water is an excellent Sudorific, its Effects are produced by its Action as a Stimulus on the Stomach. The Emetic Tartar and all the preparations of Antimony are frequently as powerful Sudorifics. Ipecacuanha & Opium form Dover's powder: but Emetics are of the utmost Importance in our practice of Fevers and require our particular Attention. They are at present employed all over Europe and are of great Service in Fevers. Of their Operation, Vertues and Effects in Fevers we must now

enter

enter on the Consideration; they are twofold. 1st as employed to excite full Vomiting; or 2ndly to excite Nausea only. Full Vomiting discharges the Contents of the Stomach, invites other Fluids into that Organ to be evacuated, viz. from the Liver, Spleen, & Pancreas. Nothing is more evident than that they emulge the Biliary Ducts, hence the frequent Ejection of Bile. Also from the Exercise of Vomiting all the Abdominal Viscera are compressed, by means of the diaphragm &c. The Effects of Emetics are also to determine the Fluids to the Surface. Not from the Sweating that occurs during their Operation do we prove this not by the Exercise, but by their particular action on the Nervous Fibres of the Stomach, for Emetics given at the Approach of the Cold Fit puts an End to it and introduce the hot or sweating Fit. This may be produced by Emetics without Vomiting; this is therefore a decisive proof that their action is only on the Fibres of the Stomach; this also proves that Spasm is the proximate Cause of Fever; and the Solution of that Spasm is a proof of the propriety of their Use. We go on further to consider the Use of Emetics. If Emetics are employed to evacuate the Contents of the Stomach, full Vomiting is necessary. This is generally necessary in the Beginning of all Fevers and before the paroxysm of Intermittents, but some difficulties occur with respect to their Use; if where there is a tendency to Inflammation in the Stomach, they are improper. Another Objection is Obstructions in the Liver and

Spleen

Spleen; but the Inconvenience or Danger attending this Case may be guarded against by directing a Vomit in such a Manner as to make it prove purgative, and the Inflammation that follows these Obstructions generally happens in the Advanced Stage of the disease. We have a strong proof of this in Intermittents. Another Objection is that altho' they determine to the Surface, their Effects are transitory & are followed by debility. Full Vomiting is not to be depended upon to promote this determination, but the best means are to exhibit Emetics in Nauseating doses without being vomiting. Given in this way it remains longer in the Stomach if given in Substance and is by degrees carried over the pylorus into the Intestines and there proves purgative. We are in the next place to consider when and in what Manner they are to be employed in particular Cases. Emetics by their action on the Stomach powerfully determine to the Surface and thereby remove Spasm They should be given in the Beginning and before the Spasm has gained Strength and in Case of Relapse they should be exhibited at any time of the paroxysm, but this is to be considered as proper in Intermittents. There is difficulty in knowing when to give them in Intermittents but in Continual Fevers it is more difficult as the time is not so easily determined, but they should be given before the Accession if it can be known. The Accession is generally

twice

 twice in twenty four hours, one about Noon which we seldom discover and the other in the Evening, the exact period of which varies as from 6 to 12 O'Clock. As the Time of the Evening Exacerbation differs and is difficult to be ascertained, I think it is best to exhibit an Emetic in the Afternoon as it will have a tendency to moderate the Evening Exacerbation. Nauseating doses are universally employed in Eruptive and Continued Fevers, but their Effects are most evident at the Beginning of a disease. Some give Nauseating doses through the whole Course of the disease but I think it much better to give one or more doses at the Accession of the paroxysm, for Emetics by repeatedly determining to the Surface produce Sweat, but if they do not produce an entire Solution of the Spasm, they increase and confirm it and thereby protract the disease. Of the Kinds of Emetics: this is not very material as their Effects are nearly the same. Squills have been used in Asthmatick Complaints, but possess no particular Virtues above other Emetic Substances, and are unfit for nauseating or determining to the Surface and are therefore neglected; very few Physicians make use of Squills now in Fevers. Ipecacuanha is not so generally employed but may be in preference to Squills; it does not answer well except to evacuate the Stomach. It produces no permanent Effects. If it happens to be retained; its Stimulus is not propagated to the System so as to produce equal Effects with the more powerful preparations of Antimony. On this Subject I would particularly refer you to Sr John Pringle

Before

Before I dismiss the Subject of Ipecacuanha, let me here observe to you that 40 grains are not now necessary for a Vomit, as was formerly thought; but where the Intention is to evacuate the Contents of the Stomach and Intestines, Ipecac: is proper and 10 grains will be sufficient for a dose & will be the Safest Emetic as it does not increase the Inflammatory State of the Fluids. Kermes Mineral has been much employed by the French Physicians, but is uncertain in its Operation. The next Medicine is James's Powder, no person doubts but it is an Antimonial Preparation. It possesses no particular Advantage or Virtues. As depending on the Acid in the Stomach it is uncertain in its Operation; for my own part I prefer those combined with Acids, which renders them active and their Operation certain. The preparations of this kind are the Antimonial Wine & Emetic Tartar; these are the principals. The latter is the most unexceptionable, it is easily subdivided into small doses. I managed so as to increase the dose at pleasure. If I want it to act as a full Vomit I give 1/4 of a grain (dissolved in half an Oz. or a Table spoonful of Warm Water) every 10 or 15 minutes till that Effect is produced. If I want it to nauseate, I then give the above Quantity every hour or so untill it has had the desired Effect. If a reaching is produced Warm Water may be given to promote the Vomiting, but this is best to be avoided if possible; and the Sickness should be borne with if it can be done. It is generally observed that James's powder produces a Sweat, this I believe it will do, but I prefer the Tartar Emetic. Emetics make a very conspicuous Figure in

the

 practice of physic being universally used, but there are many physicians who deny their good Effects, but yet these Negatives are not to be taken. They suppose that they are generally employed in Compliance with Custom, but this I can't allow for they sometimes entirely put an End to the disease at other times mitigate and render it regular. I have heard of a physician that gives in an Intermittent nothing but Nauseating doses throughout the Whole paroxysm. I do not deny but Emetics are of Service but it should be at the Accession only, as a Repetition is not always proper particularly in continued Fevers. I have thus given you the Reasons for and against the Use of Emetics, and drawn a Conclusion from Reason and Experience. We now come to consider the external Remedies employed to remove Spasm, & first of Blisters; which are almost universally used in Fevers. We shall endeavour to explain their Operation by their Effects on the moving Fibre. When the plaister is applied to the Skin on any part of the Body, by its Stimulus an Inflammation is produced and an Effusion of Serum under the Cuticle which when it rises gives the Appearance of a Blister. In some the pain is very great the Stimulus being communicated to the whole System; this is not ~~the~~ generally the Case, neither are the Stimulant Effects of Blisters so great as has been generally supposed. But even where the Stimulus is great and attended with considerable irritation when the Blister is opened and the Serum evacuated it is then removed. They have been employed as Stimulants in Nervous Fevers. Physicians generally think that in Inflammatory Fevers they soften the pulse, lessen the

subjects the patient to great pain and irritation in the Subsequent dressings. Before we leave this Subject it is necessary to mention what particular parts they should be applied to. 1st In Topical Inflammation they should be applied as near the suffering part as possible. 2nd The inside of the Arms and the inside of the Thighs are proper places. Some apply them to the Back, but if we consider that the Patient is very apt to lie on his Back we shall find that it must give some pain and be difficult to confine; also in dressing the patient is much exposed to take Cold. Upon the Supposition of derivation and Revulsion, they have been applied to the Ancles in Cases of a determination to the Brain, but in this Case they should be applied to the Hairy Scalp; and as the Head for this purpose should be shaved, in shaving some pimples are generally cut off it will therefore be proper here to interpose a piece of Lawn or Cambric between the plaister and Head to prevent absorption &c as I have before mentioned. Further, in Case of Coldness of the Extremities, Blisters do not use; and when their Effects are intended to be communicated to the whole System it is immaterial to what part they are applied. Another method of removing Spasm is by the Use of the Warm Bath. Dr Gilchrist recommends the immersing the whole Body in Warm Water; but this is difficult and inconvenient as we seldom can get Vessels sufficiently large for that purpose. I think fomenting the lower Extremities, as high as the Knees however, is the most convenient and is to be preferred; and this should be done with as little disturbance

disturbance to the patient as possible. We are to remove the Bed Cloths from the feet when the Water is ready, and lastly we must take Care that it is continued for One or two days as the Patient is able to bear it. I have known good Effects from its use even in two hours. It is to be continued an Hour at least seldom less. It is best in the advanced Stage of the disease after the Symptoms of Inflammation are abated. In Rheumatism we can relieve the pains by Warm Fomentations but if these are not preceded by Bleeding and the inflammatory Feathers abated considerably Dr. Winterringham long ago observed, that they would be attended with bad Consequences. Warm Fomentations thus applied are particularly useful in Fevers arising from debility and Spasm on the Extremities, and in partial Inflammations, as that of the Brain; by inviting more Blood to the Extremities we certainly then relieve the Brain by taking off the Fulness and Tension of the Vessels of the Head. This finishes our Consideration of the first general Indication, which was to take off the Excess of Stimulant powers. We next proceed to consider the second general Indication which is to remove or obviate the excess of Sedative power, or debility by supporting and restoring the action of the Arterial System. The Methods employed for this purpose are divided into 4 general Heads; 1st the Operation of Cold. 2nd by the Operation of Tonics. 3rd by the Operation of Stimulants. 4th by the Operation of Antispasmodics. Of these we shall treat seperately and first of the Operation of Cold, This proves a Stimulus to the Animal Body and is also more or less Astringent, hence

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 is Tonic; and however partially it may be applied, is communicated to the System, and extended over it increasing the Tone and Inflammatory diathesis. Although in some Cases Cold may produce diseases, yet in other Cases under opposite Circumstances, it may prove a useful Remedy. Cold may be applied either externally or internally: and first of the Effects of Cold drink. It has been observed that Cold any how applied may be communicated to the whole System, therefore every purpose will be answered by Cold taken into the Stomach; hence it becomes a Remedy in the Cure of Fevers. Whether Cold or Warm drinks are injurious or serviceable in Fevers, has been a Subject of dispute among physicians. I imagine however that Warm drinks are best as Diluents, without regard to the Temperature [redacted]. The Use of Cold drinks is indicated upon the principles I laid down for the Application of Cold, but as it always tends to produce the phlogistic diathesis in the System, therefore when this is present they should be avoided. Cold ~~Drink~~ also occasions Anginas, pleurisies and peripneumonies. There are Instances of a draught of Cold Water having produced a peripneumony, altho this is not always, yet the Tendency is there, and from this we draw a Conclusion, that Cold any how applied increases the Inflammatory diathesis. The Ancients favoured the Use of Cold Drinks in Fevers but rejected it in those that were Inflammatory. On this Subject we should consult Celsus, who says that Cold drinks always increases the Inflammatory Diathesis, (vide lib. Cap. 3.) Cold Drink if not taken in too large Quantities at a time is

proper to restore Tone to the System. If the nature of the disease there of is doubtful, some Caution is necessary. If it appears to be of a putrid kind accompanied with inflammatory Symptoms, it is injurious. In determining this, however, the season of the Year ought to be considered. Our Cautions are often carried to too great lengths, but we are to conclude that Cold drinks are necessary in all Fevers that are putrid, Nervous or Autumnal Intermittents or Remittents particularly in warm Climates and in the decline of all Fevers when the Inflammatory diathesis is entirely removed; here it is of Service by supporting the Tone of the System and thereby helping to carry off the Fever. This in my Opinion is the place in which you can give Cold drinks, but for further particulars on this Subject I must refer you to Dr Fisher, who has treated this very fully. By Spanish Physicians Cold Water is given during the paroxysm in small draughts with Safety and Advantage; but Ice Water is to be avoided, except where the patient has been accustomed to the use of it. The practice in Europe & in all the Southern ~~Countries~~ Climates is when the Fever comes on and a Sweat begins to break out, they give Cold drinks to promote the Sweat. I would advise you to consult Dr Cleghorn on this Subject. He doubts about the Utility of giving Cold or Warm drinks. [ord Chap. 3. pag 174] By some of the ancients drinks of any kind was denied the patient until the Thirst became intense, then plenty of Cold Drink was given to excite a Sweat and procure a Solution of the

disease

disease. In Inflammatory Fevers this is not to be attempted until the Inflammatory diathesis is entirely removed, & the Circumstances give reason to suppose a critical solution of the disease may be thereby effected. Lommius on Fevers is to be consulted, who has fully explained the Method of giving Cold drinks in his History of Fevers, do use Aqua frigida in febribus: but his theory is not to be attended to. In this Country we generally follow the British Physicians, and with great propriety in some respects, but the difference of Climates produces very great differences in the diseases of the two Countries. Our Fevers in the Summer are nearly like theirs tho' our Climate is much warmer than theirs. Ours resembles those of the Southern parts of Europe and in Summer those of the West Indies. Cold Water is likewise applied externally for the Cure of Fevers, but the proper time for its use is more difficult to be determined than the other. It has been employed with advantage in different Countries by washing the patient all over in Cold Water in the highest degree of Nervous and putrid Fevers, particularly the latter. In the Works of Galen you may find where he mentions the Use of the Cold Water in Fevers. There is mention made of patients stealing from those who were guarding and nursing them, and plunging themselves into a Mill pond which produced a final solution of the disease. Dr Schreiber makes mention of its good Effects in Fevers in his Works. From all this you may know that it is still used by some and neglected as injurious by others. Who would have thought thirty years ago, that we should now

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expose the patient labouring under the Small pox to too much Cold air, Water &c. The Second means of obviating the Effects of Sedative power is by Tonics; by which is meant such Medicines as increase the Tone and Contractility of the moving Fibre. These are either Fossil or Vegetable, the former are but little used; of the latter the Peruvian Bark is the principal: this Treated of fully in my Lectures on the Materia Medica, and here we shall only mention its Use in particular Cases as a Tonic. It does not operate upon our fluids but by giving Tone to the Stomach and the moving Fibre and hence to the whole System. That it operates as a Tonic in Intermittents is very evident. We do not allow that its Effects are produced by its Operation on the Fluids, because they are too sudden and the quantity too small to produce such good Effects which we oftentimes discover almost immediately. We likewise find that where the Tone of the Stomach is increased, the Bark is injurious, & in all inflammatory Fevers. Nature in checking a Gangrene always brings on a Tone in the neighbouring parts in such a manner as to enable it to throw off the Sloughs; here the Bark is of great service; it acts as a Barrier and gives Tone to the sound flesh, preventing any farther Injury from being done to the System and enabling it to throw or slough off the morbid from the sound parts. The Bark here cannot be said to Operate immediately on the Fluids, the Quantity would be too small to produce any good Effects by Operations

operating immediately upon the putrid Matter; but here it acts on the Stomach and from thence is communicated to the whole System and by giving Tone to the surrounding parts, produces that Inflammation necessary to the separation of the morbid from the sound parts. This is further illustrated by its Effects in Intermittents: the Spasm that then takes place depends upon debility, the Bark by giving tone to the System prevents a recurrence of that Spasm. That it acts as a Tonic is proved by its being useful in Intermittents and hurtful when too much Tone is already present, and from its success in Hysteric, Nervous and putrid diseases and all other Cases of debility; these all prove the Tonic power of the Bark. With respect to its Use in Intermittents; these you are to consider to depend upon a Spasmodic Constriction of the Surface arising from Debility; this therefore is to be overcome by the Tonic powers of the Bark and it requires little study to determine the propriety of its Use. But in Continued Fevers it is more doubtful. In Cases of putrid Fevers arising from Contagion and accompanied with great debility, petechiæ &c the Bark is the only Remedy. With respect to the Manner of exhibiting it; it is not useful in any Case except it is given in large Quantities. To be more particular; it is of no Service in a less Quantity than ℥ß. In Intermittents it should be given as near the accession of the paroxysm as possible and
℥i doses of a drachm may be given every hour. Let us suppose we have a Quartan to Cure; here we have two days of
Intermission

Intermission and it is not necessary to croud it upon your patient the first day, for if you were to give an Ounce immediately after the Fit it would have no Effect; but ℥j given in the last day of the Intermission, will be equal to several Ounces given on the preceeding day. By this Management the Operation will exist and be most vigorous at the time of the Accession, and prevent the recurrence of the paroxysm. In a Tertian ℥ss may be given every hour but it will be most effectual when given on the day of the Fit and repeated as often and as near the Time of Accession as possible. In Case of a relapse we must employ it with great diligence and repeat it at proper Intervals. This proves that the Effects of the Bark are transitory and therefore should be continued a due length of Time, even after the patient has missed the Fit. I generally order 4 or 5 doses to be taken on the day the Fit is expected. Given in Substance it is of more Service than any preparation Pharmacy or Chemistry can afford us. The Taste should be as much covered as possible. Some will take it best in the Form of a Bolus or rolled up in a Wafer, but there are many who cannot take it in this latter way, therefore they may make it into an Electuary. For those who cannot take it in this form, it may be triturated with Gum Arabic and dissolved in Water which suspends it and prevents the disagree-

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disagreeable Taste and Adhesion to the Mouth. If it cannot be taken in this Way, the Extract may be tried. A very good Extract may be made with Brandy. The Bark may be given in a Tincture, but this is not so good in Fevers: the Decoction may be combined with the Tincture. I have ordered the Bark to be quilted in a Jacket and worn next the Skin with good Success in the Cure of Intermittents, this Hint I took from the London Medical Essays. If the Extract is rejected which is frequently the Case, especially in Children, it may be exhibited by Glyster. The Bark sometimes proves purgative, this is to be obviated by Opium - If I purpose to give 6 doses of the Bark in six hours I then give 10 drops of Laudanum in each of the three last doses. Crude Sal Ammoniac may be joined with the Bark in the Cure of Intermittents, where the Intermissions are imperfect; I have also used it in Cases of Anasarcous Swellings and where there are Visceral Obstructions. Various other Remedies have also been combined with Bark. The Virginia Snakeroot is also one of those Remedies, but this is of no use unless to make it lie better on the Stomach where the Bark is not sufficiently Stimulant. Rhubarb is one of the best Substances to be combined with it when the Intention is to keep the Bowels open. As the Bark is often of a bad Quality, some Substitutes have been sought after and tried as Galls and Gentian; they are simple and Astringent bitters and may be given to prevent purging

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or the Medicines running off by Stool which they are apt to do, Chamomile especially. There are several others mentioned as the Horse Chesnut Tree Bark, the Bark of the Ash and Poplar. The Common people in the Country 'tis said, make use of the Dog Wood Bark with Success in curing Intermittents; whether this is true or false it is well worth noticeing and very probably it may add to our Materia Medica. The 3rd Means of obviating the Effects of an Excess of Sedative power is by the Use of Stimulants; of these are Contrayerva tho of little Effect, and Virginia Snake Root:- this latter is used more frequently than the former but not without other Remedies mixed with it; tis however seldom used in Fevers. Sir J. Pringle says that it is always too heating as well as stimulant in the Cure of Fevers. But the most safe and effectual Stimulant is Wine. I told you that delirium might arise either from a Phlogistic Diathesis or be founded on Debility. When the Symptoms of Debility are present and very evident Wine may be useful, but when a delirium has come on with wild Looks out of the Eyes, redness and turgescence of the Face &c. Wine here will be very injurious. In all Nervous putrid and Jail Fevers, where no Inflammatory diathesis occurs in the beginning, Wine may be allowed. I shall now make a few practical Observations with respect to the Use of Wine in particular Cases. When Fevers arise from

Contagion

Contagion accompanied with great debility and without Symptoms of Inflammation, even in the early Stage we may use that safest of Stimulants Wine. But if any Topical Inflammation is expected we must be cautious. We are 1st to enquire into the Habits of the patient, to know if he has been used to drink large Quantities; if he has we may be bold in prescribing Wine. If we are not guarded by the patients former Habits, if the appetite craves Wine, and whenever the patient calls for it greatly we give it. If on trial the Symptoms do not increase with the Fulness of pulse or delirium, it may be concluded it was proper to exhibit it. With respect to the kind of Wines; Claret and Rhenish are the best, as not being so heating as the others. It should always be mixed with Cold Water that it may be the more cooling, and as Wine is seldom proper where Cold Water is to be denied: this particularly applies to Autumnal Intermittents. In Vernal and Winter Intermittents accompanied with Catarrh, and in Nervous Fevers which in the Beginning show Signs of Inflammatory diathesis; hot warm drinks are necessary at least in the early Stages of the disease. A fourth Means of obviating the Effects of an Excess of Sedative power is by Antispasmodics and 1st of Opium. I have formerly endeavoured to prove to you that it possess'd both a Sedative and Stimulant Effect. It is one of the most universal Medicines in practice. I am only now to consider its Effects in the Cure of Fevers. It is generally thought to be improper on account of its Stimulant power

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in all Inflammatory Fevers and in the beginning of most Fevers, especially if there is any Suspicion of an Inflammatory Diathesis being present. On many Occasions Opium may be useful from its Stimulus, for in Fevers that arise from debility and in those where Wine is proper, Opium may always be used, but is more hazardous than Wine. Opium by its Sedative Quality may be useful in all Cases of pain arising from spasmodic Constriction, here it is the first and best remedy as it takes off all Irritation from the Nervous System with Certainty and Safety, If the dose is considerable it lowers the pulse and renders it less frequent. Upon this principle of Opium taking off Irritation, I make no doubt but it may be useful in Fevers, and in that delirium arising from debility, where the Frequency of the pulse is not increased. We find that an Opiate may be given in the Cold Fit of an Intermittent, or even an hour after, it acts by its Stimulus exciting perspiration and overcoming the Spasm, here its Use is not difficult, and I think may easily by Analogy be transferred to the Cure of Continued Fevers. In some Fevers, particularly arising from Contagion and where the Cure depends upon Sweating in the Beginning Opium may be employed as the most powerful Sudorific. There can be no general Rules laid down for its Use without some Exceptions. Some physicians employ it in all Inflammatory diseases and they give Instances of its Success; and we know that in Rheumatism

which

which is an Inflammatory disease, that after Bleeding and Evacuations, Opium by procuring a plentiful Sweat effects a perfect Cure. In the Small Pox, Opium has been given by Sydenham and with Advantage as he relates. With respect however to my own practice in giving Opium, I never give it in Inflammatory Cases, except when some Irritation is present, as in the Trachea and Lungs, there Opium gives great Relief; and in the Small Pox where the Irritation of the pustules may be very great, independent of the Inflammation, Opium is an excellent Remedy. In Rheumatisms it acts as a Sudorific and not as an Anodyne. The next Antispasmodic is Camphire; this I mentioned in a former Lecture. This is much used in the Cure of Fevers and but little understood. I have used from 5 to 8 and 10 grains at a dose and repeated it every 2 or 3 hours with very good Success in Nervous Fevers. It appears to relieve Delirium and Subsultus Tendinum almost as quick as Opium. Musk is also a powerful Remedy, and if genuine is a good Antispasmodic. It should be given in large doses. Musk may be employed in all Cases in which Opium is indicated. It acts in some measure like Opium, producing a sound Sleep and plentiful perspiration. Musk and Camphor may be used more safely than Opium. The next Antispasmodic is the Oleum animale, it is the Empireumatic Oil of Animals and is highly recommended by some Physicians as an excellent Antispasmodic and has been recommended in all Cases of

Epilepsy

Epilepsy. Castor is frequently employed in Fevers but I think it is of very little Use. The last of this Class I shall mention is the Volatile Alkali; this is a powerful Antispasmodic, being quickly diffused thro' the System, no danger is to be apprehended from its Stimulus being too great in the Stomach, therefore it is one of the safest Antispasmodics and Stimulants. Its Effects are transitory from its extreme Volatility and from its being neutralized in the Stomach by the Acid there it often meets with. It is employed in all Cases of Languor and debility in the System. Sir John Pringle has changed our Notion concerning it: we generally thought it was Septic but he discovered it to be an Antiseptic which is now fully established and proved to be particularly useful in putrid and Jail Fevers with great debility, here it acts similar to Wine. I have known many Cases where the patients pulse was hardly to be felt with Syncope &c and has been relieved beyond expectation by the frequent Use of Sal. C.C. Volat. The dose on account of its Transitory Effects should be often repeated but not continued longer than is immediately necessary. It should be given alternately with Wine, which by its Acidity corrects the Acrimony of the Volatile Alkali. I cannot however but think, that by its Stimulus it increases the Heat of the Body by stimulating the Vessels to a quicker Action and I think by that means is apt to induce a dissolution of the Mass of Blood and should not be continued any great length of Time. This finishes our Second Indication and now we

shall

 shall go on to consider the 3rd General Indication which was to obviate the Effects of an Excess of Septic power. The Measures employed for this purpose are to be divided into 4 heads. 1st by avoiding the remote Causes of putrefaction, or that which puts it in Action; this is a ferment introduced into the Body but may also be produced by the increased action of Heat on our Fluids or the Excess of Stimulant power therefore Heat may be considered as a remote Cause. The 2nd Head is by avoiding those Effluvia which arise from Marshes, the Nature of which I formerly explained as well as that from putrid animal Substances or Human Bodies infected with putrid diseases as in Jails and Hospitals where there is not a free Ventilation. When a person is attacked with a putrid Fever he should be exposed to a free Circulation of air, have his Linen frequently changed to prevent any further degree taking place &c. To prevent Contagion persons should avoid coming into Contact with the Sick, or even with their Cloaths, as there is more danger from that than from being in the Room only. Here the Bowels should be kept gently open to prevent an Increase of putrefaction in the Stomach and Intestines. 3rd To obviate the Septic Tendency the Excretions must be kept open, by which the putrid Ferment may find a passage out of the Body by Stool, Urine and perspiration. But greater Relief is found by removing Spasm on the Extremities, than by these discharges. The 4th Method of obviating the Effects of Septic power is to be attempted by the Use of Antiseptic Medicines. I have mentioned that the two chief Sources of Fever were marsh and Human Effluvia. The

Effluvia

These Effluvia prevail in Hospitals and Jails crowded with patients labouring under putrid diseases and are most dangerous when lodged in Clothes; they are then called Fomites. Hence the great necessity of changing the Bed Clothes that have been in Contact with the Sick. This is of great importance, and may be done with safety in any Fever, and without this Caution the progress of Putrefaction is hardly to be stopped; for this reason the Physician should never sit on the Bed of his patient when labouring under this disease. The Excrements of the Patient should be immediately removed in all Cases of putrefaction. We obviate the Septic Tendency by evacuating the Contents of the Stomach and Bowels, which by Stagnation and the Heat of the Body become putrescent, as for instance the Bile and the other Juices of the Stomach, hence keeping the Bowels open is very necessary and useful. The next means of obviating the Septic tendency of the Fluids is by Sweating. Notwithstanding the putrid ferment may be present in the System, yet no great degree of putrescency takes place, while the Excretions are regularly performed. I have also said that some diseases are only to be cured by plentiful Sweating, this acts not by evacuating the Morbific Matter or putrid ferment present in the Mass of Blood but by relaxing Spasm, obviating Fever and promoting the different Excretions. The 3rd. Means of obviating the Septic Tendency is by Antiseptic Medicines and first of Cold. No Ferment can operate without Heat, therefore Cold air tends to check its operation, the next are Tonic Medicines and

Lastly

~~Lastly~~ 3rd by plentiful dilution; this operates upon the Mass of Blood and keeps open the Excretories. Another Means is by Vegetable diet, this should be such as is the least putrescent. We also use Acids and Acescent Vegetables; by this we correct and obviate the putrid Tendency in the primæ Viæ, and when conveyed to the Blood prove antiseptic. 5th Means are Neutral Salts. These are undoubtedly Antiseptic and may be given in as large Quantities as the Stomach will bear. If not so powerful antiseptics they may be useful as Diaphoretics by opening the Excretories. Tonics are also Antiseptic, particularly the Bark which is highly useful to obviate the Septic Tendency of the Fluids. This finishes the general Doctrine and Method of Cure in Fevers. We shall now speak of Inflammatory Fevers; by these I mean those Fevers which are attended with Topical Affections and an Injury of the Functions of some Internal part. But before we proceed further let us mention the proximate Cause of Inflammation — in general this is owing to an increased Impetus of the Blood in the Vessels of the part affected. The Causes of this ~~cause~~ next to be enquired into. Obstruction is one; this acts by obstructing the passage of the usual Quantity of Blood, and by distending the Vessels of the part proves a Stimulus ~~[illegible]~~ to the Neighbouring Vessels. This we judge to be the Case from the following Circumstances. 1st When an Obstruction takes place and while it gives no Stimulus no Inflammation is produced. 2nd We know that direct Stimuli or acrid matter applied to a part are a frequent Cause of Inflammation

Inflammation. Some have supposed that Cantharides produced Inflammation by their Spiculæ entering the part and obstructing the Vessels but we know that they produce it only by their Stimulus upon the Nervous Fibrillæ. Inflammation therefore consists in the increased action of the Vessels of the part excited by Stimuli. Where no external Stimuli are applied, it arises from an unusual Quantity of Blood determined to a particular part, producing Obstruction or Congestion, which proves a Stimulus, particularly if there be an increased Resistance to the Passage of the Blood by a Constriction on the Vessels at the same time. Thus Cold applied to particular parts, produces Rheumatism, by diminishing the Capacity of the Vessels, while the Impetus remains the Same: hence parts most exposed to Cold are most subject to Inflammations, as the internal Membrane of the Nose, the Fauces and Bronchiæ producing Catarrh, Angina and Pulmonic Inflammations. Thus have I endeavoured to establish the Doctrine of Obstruction as a Stimulus producing Inflammation or Inflammatory distension; but this is not sufficient to explain all the Phenomena attending it, therefore must also conclude that Spasm must at the same Time affect the Vessels on the Surface which produces the Cold Stage, occasioning also an increased Resistance; for whether the Obstruction be owing to the diminished Size of the Vessels by spasmodic Constriction, or to an increased Quantity of Fluids the Effect is the same. From what I have now mentioned I think I have plainly discovered to you the proximate Cause of Inflammatory Fevers

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and altho' I have admitted Obstruction as a part of the proximate Cause of Inflammation, I would wish to guard you against relapsing into the Old doctrine of the Cause of Inflammation; viz. the Blood clogging up the extreme Vessels: this was the Opinion of Boerhave. and took its rise from the Inflammatory Crust on the Blood when drawn from a Vein. Cold applied to the Body produces Tension and is communicated to the whole System and is a predisposing Cause of Inflammation. Those of vigorous Habits and rigid Fibres are most subject to Inflammatory ~~Diathesis~~ pulmonic affections: this may be occasioned not only by Cold applied to the Body, but by the too frequent use of Steel and other tonic Medicines. This inflammatory diathesis therefore depends upon the increased Tone and Contractility of the Arterial System: This we also conclude from the Cure, is soonest effected by Bloodletting and other Means of producing Relaxation of the System. Of the Terminations of Inflammation: It has been long observed that Inflammation terminates either by Resolution, Suppuration or Gangrene & Schirrus. That by Resolution is obvious if the Obstruction yields, the Spasm is overcome and the Fluids return to their usual Channels; but this is not very frequent; the Increased Impetus more commonly produces an Effusion into the Cellular Membrane of the part with Tumour. The Tumor is more probably owing to the unusual Quantity of Matter effused than to distension of the Vessels. Altho this Effusion does take place if the Spasm is removed and a Resorption comes on we still say the Inflammation has terminated by Resolution: but in it the Matter differs from the

the common Vapour which is exhaled thro' other parts of the Body. If it be of too thick a Consistence to be absorbed it is then converted into pus and we say it terminates by Suppuration. This could not be accounted for untill lately when by Dr Gaubius's Experiments it appears that the Serum of the Blood in the most healthy State contains a Matter which by Stagnation is converted into pus: this therefore proves Suppuration to be owing to Serum which is effused. The third Termination of Inflammation is by Gangrene: when the putrefaction is in so high a degree as to destroy the Texture of the part it is then called Sphacelus, but of this I treated in our Lectures on Acids when upon the Materia Medica, and therefore I shall mention the fourth Termination which is by Schirrus: this happens in Glandular parts. The 5th Termination is when the Seat of the Inflammation happens in the Parenchymatous Substance or parts endowed with a loose Cellular texture, where an Effusion is produced and is carried into the Cellular Texture of the part; this happens in peripneumony and produces no change in the Fluids, but by Obstructing Circulation thro' the Lungs fatal Suffocations are the Consequences. The first general Indication of Cure is to be attempted by Resolution and is said to be imperfect if it terminates in another disease. This is to be accomplished by taking off the increased Impetus in the vessels of the part and removing the Spasm upon the Extream vessels: the first is to be done by the Antiphlogistic Regimen, & Bleeding as the most powerful remedy. But here I shall consider the Quantity necessary to be taken, as it requires some limitation.

 limitation, for by large Bleedings a Fainting is brought on, and by repeating it sometimes a fatal deliquium animi. I have heard of a Gentleman who was bled in an Inflammatory Complaint that by having a large Quantity of Blood drawn died of a deliquium animi before the Ligature could be removed. When a deliquium Animi does not happen large Bleeding may produce other Effects very pernicious. How the Fluids are retained in the Human Body has been a Matter of Wonder and dispute when there are so many Thousands of Outlets for it them to pass thro' and escape: It is owing in part to the Size of the Particles of the Blood being too great for the Diameters of the exhaling Vessels and from the Coagulable Lymph and red Globules involving the thinner parts thereof and are therefore the Causes of its being retained. When these therefore are carried off in too great quantity by Bleeding, the remaining Fluids and those that may be taken in Afterwards will be of greater Tenuity hence Effusions into the different Cavities will take place producing Anasarcous Swellings. From the Use of Solid Food the thicker parts of the Blood may be regenerated, but as the Appetite is lessened, Fluid Food only will be taken, and thus the thicker parts of the Blood are carried off faster than they can be regenerated and by the digesting and Assimilating powers being weakened the proper Quantity of Nourishment will be denied, therefore the Tenuity of the Blood will be continued so such as to pass off by the Exhalants in the same manner as before described. These Consequences ~~have been~~ are generally imputed to Inflammation, but in reality is often owing to too frequent Bleedings

Bleeding; hence a Caution is necessary in Cases of Pleurisy and peripneumony where we are most apt to bleed to Excess. The Matter expectorated in peripneumony arises from the mucous Glands of the Bronchiæ and an Effusion of Serum into the Bronchial Vessels. Therefore by large Bleedings the Tenuity of the Blood is increased and this Effusion promoted to so great a degree as to produce Suffocation, the patient not being able to expectorate so great a Quantity. This Caution is particularly necessary to those disposed to Catarrh and in the decline of Life. The same Caution is necessary in Cases of debility. In Rheumatism we are to guard against the consequent debility produced by excessive Bleeding; this tho' it sometimes cures the Acute is apt to occasion a Return and render it Chronic and perhaps continual even for Life. General Rules therefore for Bleeding cannot be given scarcely; but the Age Sex, Temperament and Habit of Bloodletting to which the patient has been accustomed are to be considered and our Conclusions drawn accordingly. We may however add a few Remarks on the Quantity of Blood to be taken: One pound or 16 oz is a medium Quantity for an adult; two pounds in twenty four hours is tending to Excess. Three pounds in two days is a large Quantity and cannot be carried further without disadvantage; although in particular Cases as in peripneumony where there is danger of Suffocation, and an Alternative must be chosen we would undoubtedly prefer plentiful Bleeding. Taking four or five pounds is hazardous and esp. in

 in Cases where the patient has been accustomed to frequent Bleeding. The Time in which Bleeding is employed is of Importance as One pound taken on the first day will have more Effect than two pounds the second day. Bleeding has been confined to the three first days by some, but this is not a general Rule. If the Symptoms return at any period of the disease Bleeding is to be recurred to and when the Violence of Inflammation is so great as to threaten Mortification, Bleeding is to be employed. These Regulations apply to Inflammation only, but in Fevers they must be taken with greater Limitations. I have only to remark that when general Bleeding can no longer be employed with Safety we may have recourse to Topical Bleeding by Leeches and Cupping with Scarification. Purging is another method of abating Inflammation; this is not so powerful as Bleeding and in some Cases is incovenient as in the Rheumatism where the difficulty and pain that attends getting the patient up renders it improper and the frequent rising to Stool proves a greater Stimulus oftentimes than the purging does good. Bleeding in general may supersede the necessity of purging, but purging cannot supersede the necessity of Bleeding. In Cases of Inflammation of the Eye and Phrenitis purging is very useful, not only abating Inflammation by Evacuation, but by Revulsion taking off the determination from the Head. Another Method of diminishing the Impetus of the Blood is by the Use of Refrigerants as Acids and Neutral Salts the principal of which is Nitre. In external Inflammations Refrigerants and Repellents have been

used, have now for a long time been condemned. As Sedatives they are useful: The Saccharum Saturni and other preparations of Lead have become familiar and favourite Medicines in this Intention. Some other Saline Substances mixed with Spirit of Wine, are also useful; these act as Sedatives on the moving Fibres. Mr. Goulard has introduced a preparation of Lead into practice, it may be useful in some Cases, but the theory on which he endeavours to establish its use is of the most trifling and frivolous kind; this, as well as the Universality of its Use give Cause to suspect both the Truth of his Observations and his Candour. I have seen his Medicine of great Service in Strains and external Inflammations, but if it does not succeed immediately it is to be discontinued. Another Remedy for Contusion and Bruises, particularly in the Face is the Spiritus Mindereri; it is of Service by removing preventing the Blackness and is an Improvement upon the Vinegar which is so often employed upon those Occasions; these are used to diminish the Impetus in the Vessels of the Part. The first Indication of Cure is to remove the Spasm of the extreme Vessels; this is first attempted by Warm Bathing and Fomentations. In all external Inflammations except in those of the Erysipelatous kind warm Bathing has been used; the Effect of Clear Water is as great as any Combination of it whatsoever, it acts by relaxing the Nervous papillæ under the cuticle and this Relaxation is thereby communicated to the System; these are their known Effects, but how far they are of use in resolving Inflammation is not determined: they undoubtedly

undoubtedly produce a relaxation of the Part & contribute thereby to overcome the Spasm. But on the other Hand we kn that they invite by their relaxation a greater Quantity of Fluids to the part; by the Heat also the Fluids are rarefied and the stimulus on the Vessels increased. Thus in the Rheumatism in the beginning Emollients and Warm Bathing increase the pain, hence they are not to be used till Evacuations and other Remedies have been employed to remove the Spasm; hence also the Absurdity of some practitioners, who employ Emollients and Fomentations in all stages of an Inflammation whether external or internal. The 2nd. Mea of removing Spasm is by Blisters; these are proper in deep seated Inflammation as in the Gout, in Inflammation of the Thorax and Abdomen and are of great Efficacy. These act by drawing off a Quantity of Serum and relaxing the Neighbouring Vessels also; they are useful only when applied near the part affected and that in Cases of Topical Inflammation. In Cases of a general Inflammatory diathesis they are not to be applied until the Excess of Stimulant power is removed. The 3rd. Indication for removing Spasm are anti-spasmodics, and Opium is our principal. Some suppose that Opium aggravates the Complaint, but they do not consider that it acts as a powerful Diaphoretic, hence Dover's Powder produces good Effects in the Rheumatism by as Sudorific of which Opium is a principal Ingredient but no general Rules that have been laid down in Physic hold

hold good here. Discutients and Repellents if they mean any thing, include all those Medicines employed externally as Anti=spasmodics which are rejected as generally improper, and in the next place cannot reach the Seat of the disease. These Medicines are also Stimulant, and cannot be of Service only as far as they prove Antispasmodics. Camphor has been used in this Intention and is a Sedative and Antispasmodic. It is often employed in External Inflammations and applied to the part affected. Strong applications of it, have been found to relieve the Rheumatism and Gout. The 4th and last head of removing Spasm is by determining to the Surface, and thus removing the Spasm it may remove all the Symptoms. These are Remedies employed to obtain a resolution of Inflammation. In external Suppuration the usual Methods of treatment in Ulcers become necessary and I know of but one internal Suppuration that requires a parti=cular Treatment which is that of the Lungs producing Phthisis pulmonalis. When an internal Inflammation terminates in Gangrene the case is absolutely desperate we have but little Hopes. We come now to treat of other Inflammations and these are of three kinds viz. 1st Cutaneous. 2nd Visceral 3rd Articular. I shall treat of one particular Inflammation of each kind, by which you will know how to apply the Doctrine and Cure to any others viz of the first Opthalmia, of the second peripneumony and of the third Rheumatism. We shall first speak of Opthalmia; this consists in and is defined a Redness and pain of the Eye with an Aversion to light; this is very

frequently

frequently owing to its great Sensibility and being exposed to various external injuries. 2nd From its great Sensibility and connection with the System it is affected in a particular manner by whatever induces an Inflammatory diathesis or otherwise affects the System in general. 3rd From the Tunica Adnata being furnished with a greater Number of Blood Vessels and being a lax Substance is liable to a greater Afflux of Blood and therefore is frequently attacked thereby. It is also exposed to the common Causes of Inflammation, as Cold which produces a Constriction on the Vessels of the part and is the proximate Cause of Inflammation. This Membrane not being connected to any adipose or Cellular Texture seldom admits of any Effusion or Termination by Suppuration. We next are to treat of the division of Opthalmia, viz. into Idiopathic and Symptomatic you no doubt understand what is meant by Idiopathic, however it is defined to be a disease arising independant of any other Affections of the System. The Idiopathic is divided into three kinds. 1st When it affects the Coats and Membranes of the Eye. 2nd When the Eyelids at the Edges or Margin are affected. & 3rd When the Caruncula Lachrymales are affected. This I trust will give you a proper Idea of the different kinds, but these are often combined. An Inflammation of the Adnata may be communicated to the Cilia and that of the Margin to the Adnata but one of them is primary. 1st The Paraxis this is owing to external Causes producing an Inflammation of the Tunica Adnata, as Light Smoke, Dust &c; they are commonly transitory in their Effects but sometimes affect the Eye so as to require particular attention

+ and pass from one part into another

attention. Many curious remedies for the cure of this species of Opthalmia may be found in Morgagni. He has the Case of a Miller who as he was dressing his Millstones had a Spark of Fire lodged in his Eye, which afterwards was discovered to be a particle of Steel upon which he applied a Magnet which brought it so far out as to be easily removed. The next is the Opthalmia humida, this is most commonly seated in the Adnata but is frequently communicated to the Tarsus and pericranium lining the socket of the Eyeball with an increased flow of Tears. It produces frequently an Inflamoration of the whole Eye and Head attended with pain, Heat and Fever. The Varieties of this are 1st the Opthalmia Erisypelatosa in which Crusts are formed over the Eyelids externally. 2nd is the Opthalmia pustulosa in which pustules are formed upon the Tunica adnata. The 3rd is the Opthalmia phlyctanodes; here altho' an Effusion does not take place into the neighbouring parts, yet the Matter thrown out, forms Blisters which are very troublesome and painful. The next or Second Species are the Inflammations of the Tarsus or Edge of the Eyelids, these are supplied with Meibomian Glands of the sebaceous Kind which are the Seats of various Ailmones prevailing in the System. They pour out an unctious Glue which glues the parts together and sometimes is so acrid as to corrode them. The third Species is that which has its seat in cantho major & affects the Caruncula Lachrymales: Extraneous Bodies may be washed by the Tears from the Eyes and thereby occasion Inflammation, or it may be owing to an Obstruction of or Disease of the puncta Lachrymalia

but

 but this falls under the Notice of Surgery. In all Cases of Symptomatic Opthalmia the Cure depends upon removing the primary disease. Whytt on Nervous diseases has observed an Opthalmia of the Schrophulous kind, Another kind is the Opthalmia Syphilitica, this also is to be cured by the remedies proper for the primary disease. Of the Cure, first of the Opthalmia Membanosa this comprehends all the Inflammations of the Coats and Membranes of the Eye, this is the most frequent and important of Opthalmias on account of the Sequeney, pain and other Consequences that too often attend it. The first remedies are of Antiphlogistic regimen but in particular the avoiding of Light as the Incapacity of bearing Light is a Symptom of the Disease as it produces Motion of the Eye and affects the Inflammation wherever seated. Avoiding Light would also be of singular service in many other Inflammations. Shutting up the Eye is not sufficient, for this tends to increase the Heat and perspiration of the part and the Influx of Fluids. The only Method is to keep the Room as dark as possible in this Case, and it is the most important part of the Antiphlogistic treatment. The Effect of Bleeding is to relax the Tension of the Arterial System, if this Tension is not present general Bleeding will be of little Use. If general Bleeding is employed it should be as near the part affected as possible; and Topical Bleeding is best adapted to relieve Topical Inflammation of the Eyes; but if the Tension is communicated to the System or the Inflammation be seated in the deep seated Membranes general Bleeding is most proper. In Topical Bleeding Arteriotomy has been

+ opening the Jugular Vein will have more effect than opening a Vein on the Arm —

+ unless as it renders other purges more drastic and stimulant

been practised but is attended with difficulty and its place may be well supplied by the Use of Leeches and Cupping with Scarification. These may be applied very near the part but not upon the Eyelid as it is apt to produce an Effusion and Ecchymosis, to avoid this a Glass may be applied over the Eye and the Leeches allured as nigh it as possible. Another Method is by Scarifying the Adnata itself; this is very useful but does not always supersede the necessity of other Topical Bleedings. Another Remedy employed for the Cure of Opthalmia is purging; and if we were to adopt the Aphorism of Hippocrates that "Diarrhea will cure Opthalmia we should be often led astray". It occasions a Revulsion from the Head. In Fevers we are to avoid all drastic purges, all such as have an inflammatory tendency but in this case unless Fever accompanies it the Revulsion may be increased by a Stimulating purge with advantage. Some employ Mercury joined with purgatives but as the Mercury is carried off with the purge, I cannot conceive it any way preferable to other purges. The 3rd is Blistering: Blisters are particularly useful when the Inflammation is communicated to the Membranes surrounding the Cranium with pain of the whole Head. They are most effectual when applied to the hairy Scalp, in this case cutting the Hair and shaving the Scalp is first necessary and this sometimes effects a Cure without the Use of Blisters. altho' I confess I cannot account for their Operation, yet the first is the Best Operation and to be preferred to perpetual Blisters as they are too irritating. I have here to observe to you that the first Blister is to be healed before you apply another peeth one.

of

 Of Issues the worst kind are the perpetual Issues, that are made with Blisters. The pea Issues are the best. Of External Applications, Emollients have been employed, when the parts have been much tumefied but are often hurtful by their Heat and Stimulus inviting an Influx of Blood to the Vessels of the part. When the Eyelids are affected with Exudations of a glutinous Fluid by which they are glued together in the morn. Bathing with warm Milk and Water is useful, but cooler Remedies are better, as Saline astringent Substances; but how they act I do not know except when Relaxation is the Cause. Hence Cold Bathing is the best remedy for those who are subject to Inflammation of the Eye; these are also relieved by Cold and Cold Water, but hurt by Warm Applications and shutting up the Eye. The Operation of Brandy and Spirits are more ambiguous but diluted with Water are often useful, acting as Sedatives. Of Saline Astringents the Saccharum Saturni is the most effectual in Solution and should be used cold and may be exhibited in Poultices. Other Remedies are Preparations of Copper; these have been favourite ~~Remedies~~ Medicines among most Oculists; they are of use when there is some degree of Ulceration. The 2nd Another Case is when the seat of the Inflammation is in the Tarsus Palpebrarum, this is a primary disease, affecting the Sebaceous Glands and produces an Exudation of Acrid Matter; here Scrophulous and Syphilitic Acrimony is also seated. The Cure is to be attempted by such Remedies as tend to correct and discharge the Acrimony; for this purpose Mercury is the most effectual. To obviate the parts being glued together

+ and on particular occasions with advantage
‡ by the relaxation they produce and by to

+ it is in this latter case only that it appears like an affection of the Lungs -

together the Mercurial Ointment should be used and often repeated. The 3rd Species is the Inflammation of the Caruncula lachrymales; this consists in an Inversion of the Hairs of the Eyelids which are gradually to be pulled out. The Second general division are the Visceral Inflammations. Of these I have selected Pleurisy and peripneumony as the most common and important in their Consequences. Physicians are not agreed whether these are one and the same disease, I shall therefore endeavour in some measure to determine it, by pointing out the peculiarities of each. Inflammation of the Viscera of the Thorax may have its seat in three different places; 1st in the Mucous Membrane of the Trachea & Bronchiæ + 2nd in the parenchymatous or Cellular Texture of the Lungs: 3rd in the pleura either as lining the internal Cavity of the Thorax or immediately investing the Lungs. With regard to the different Seats of the Inflammation it may be observed that the first gives Origin to Catarrh and is not to be considered here. The 2nd is seated in the parenchymatous and is called peripneumony; though this seldom occurs without being combined with the other two. The 3rd Constitutes the disease called the pleurisy the seat of which may be various, as in any part of the whole extent of that membrane. The exact seat of it is difficult to determine, neither does it make any material difference either in the prognostics or Method of Cure. Peripneumony may be distinguished from pleurisy by the following Symptoms: viz. the former is attended with fever, an obtuse pain of the Breast,

anxiety

 anxiety and Cough with a discharge of Matter from the Beginning and for the most part tinged with Blood. The pleurisy is known by a Fever, acute pain in one Side, Cough with a difficulty of lying on the affected Side, and an Increase of pain on Inspiration. The Characteristic Symptoms of peripneumony are the Obtuse Pain with difficulty of Expiration, low soft pulse, with a Turgescence of the Countenance, & the patient lies on his Back with most Ease. In pleurisy the Cough is more painful and at first dry, the pulse always hard; this having its Seat in the Membrane called pleura, the parts are more tense and the pain more acute, but with little Effusion. The peripneumony altho' it may affect the Membranes at first, is principally seated in the Cellular Texture where the parts yield, hence the pain is obtuse and the Effusion prevents the pain and occasions the anxiety by obstructing the Circulation thro' the Lungs; hence the patient by lying on his Back, obtains a fuller Inspiration. The soft pulse is owing to the same Want of Tension, the Turgescence and livid Colour of the Countenance, shew the great degree of Effusion and that it obstructs the return of the Venous Blood from the Head. Whatever the appearance of the Sputa may be the Consequences are to be considered in proportion as the Expectoration is found to give Relief to the patient without Regard to the Colour or Consistence. The Resolution of the Inflammation is accompanied with a particular Change in the State of the Urine, but this is owing to the Solution of the Spu

rather

+ while the difficulty of Breathing and Cough remain

rather than to Critical Termination in that way. The most common Termination of this disease is by Sweating; for more on this Subject see Dr. Cleghorn. Inflammations of these Viscera have likewise the Terminations by Gangrene and Suppuration. The Ancients imagined that after the 4th day the disease if not terminated by Resolution was going on to Suppuration, and therefore ordered Bleeding to be performed only on the the three first days, but we know that it terminates by Resolution as late as the 9th day; but if the disease is attended with great Effusion it may terminate by Suppuration sooner. But whatever is the appearance of the Sputa or the quantity of Effusion and if the Resolution does not take place by the 9th day we are to suspect the Termination will be by Suppuration. We may judge of the approach of Suppuration, by the pain being abated and the pulse becoming softer, by a Chillinefs and Exacerbation every Evening. That pus is formed we conclude from the pain being abated and yet the Cough continuing with some degree of Dyspnoea and Hectic Heat; and by the occurence of two Exacerbations every 24 hours the Urine lets fall a purpuraceous Sediment, the Tongue becomes moist, the Eyes appear pale, and the red Vessels of the Adnata disappear. The other Termination of Inflammation is by Gangrene. We judge of the Approach of Gangrene by the Symptoms having been very violent and suddenly ceasing, by the Symptoms of putridity that appear, Debility with delirium of the placid kind also a small and quick pulse, these are the Symptoms that denote the presence of a Gangrene, the

The fatal Termination of peripneumony is commonly an Effusion of Blood into the Cellular Texture of the Lungs which produces a Suffocation, we judge of the approach of this by the great degree of anxiety and other Symptoms of great Effusion which may become more or less putrid according to the State of the Blood and other Circumstances. That this disease terminates in this manner is prov'd by frequent dissections and is beyond a doubt. Our principal View in the Cure is to obviate this Effusion, for after this has taken place we judge the disease to be incurable. Another Termination of this disease is by an Effusion from the exterior surface of the Lungs into the Cavity of the Thorax, hence an hydrothorax often follows. For the Method of obviating and preventing this, see Dr. Eller's Treatise on the subject, but I believe it to be Effects of Excessive Bleeding. Of the Method of Cure; The principal remedy is Bleeding; this is performed by all Physicians with Freedom in the pleurisy, but in the peripneumony where the Symptoms are not so violent, tho' more dangerous, Bleeding is often too long neglected; this requires immediate Bleeding and in larger Quantities than in the pleurisy. Next I am to determine the time and quantity to be taken. The more early that Bleeding is performed the Better. The Choice of either Arm is of no Consequence, it is best if employed within the three first days, afterwards it is not

-pectoration has taken place, I think the following circum-
-stances may decide. If the Expectoration is copious, and all
the Symptoms relieved evidently thereby Bleeding may be omitted; but
notwithstanding the Expectoration is copious, and whatever
may be the Appearance of the Matter if it does not give re-
-lief Bleeding is necessary; and especially if the pulse remain
full it ought not to be neglected. In this Case we are not to
depend entirely upon Expectoration, neither have I ever seen bleed-
-ding produce that Effect unless when too long continued as to oc-
-casion so great a degree of debility, as to render the patient un-
-able to support the Expectoration. The Expectoration is gene-
-rally suppressed by the same Cause that checks other Secreti-
-ons viz Spasm, therefore Bleeding as operating by remo-
-ving the Tension, producing Relaxation and thereby overco-
-ming Spasm is a proper remedy, and in this Sense may
be said to promote Expectoration. Expectoration in the be-
-ginning may be considered as a morbid Symptom owing
to the Stimulus excited by the Violence of the Circulation,
therefore bleeding is to be employed copiously on the first Day
without regard to the Expectoration; but if on the succeeding
days the Expectoration is free and copious, with relief of the
Symptoms, you are then in no doubt but that Bleeding may
be omitted, not from a Fear of stopping the discharge but to
avoid weakening the patient. The Notion of neglecting Blee-
-ding on this principle and trusting to Expectoration only is
very generally of bad Consequences, and we conclude that
whenever the Symptoms are high, Expectoration is not

to

+ even after taking ℔ v.

* Dr. Sydenham tells us 40 Oz. are sufficient in the Course of 4 days but if the persons are of tolerable Vigour this would not be sufficient. Dr. Pringle insinuates that Sydenhams quantity was too small. Dr. Cleghorn frequently took 24 Oz in 48 hours and repeated it often so as to take 5 ℔.

⊙ The Quantity must be determined by the relief it affords. Dr Cleghorn says topical Bleedings may sometimes be used.

‡ as there is generally a gentle Diarrhoea about the 4th day I have endeavoured to imitate Nature & conclude that

to supersede Bleeding. The Absence of the Crust appear-
-ing on the Blood, Dr. Boerhave has given as a Mark, by
which we are to know when to cease bleeding, but every Prac-
-tioner is now undeceived in this Matter, for we know that this
Crust often appears as strong at the last bleeding or more so
than at the first, and particularly in Rheumatisms, If there-
-fore our practice was to be directed by this Rule there would in
some Cases be no End to Bleeding. The various appearances
of the Blood are attended with Fallacy, but if drawn with
favourable Circumstances, by a large Orifice, in a constant
Stream running from the Arm and not trickling down
and when drawn in a clear Vessel of tolerable size, not too shallow, nor too broad; when
after being thus taken from the Arm a Crust is not observed
it shows an Inflammatory State of the Blood is not pre-
-sent and gives Cause to suspect a putrid tendency, which of-
-ten occurs in peripneumony. The general Quantity to be
taken in pleurisy or peripneumony is about 3½ lbs at
different Bleedings;* but the best general Rule is to bleed
untill the Symptoms abate, or a deliquium Animi takes place
at the first Operation, and repeat it as the Symptoms may re-
-quire and the State of the pulse will admit. Some faint up-
-on the slightest quantity being drawn, as 8 oz but we must not think it
to arise from debility as they will bear after Bleedings
much better and bear 4 lbs to be taken away afterwards. No great Relief is to be expected from Strong
purges, but gentle Laxatives are necessary to keep
the Bowels open; of which the Castor Oil or Neutral
Salts

 Salts appear the best especially the former. Of Emetics: The use of Emetics in Inflammations of the Thorax has been forbid, at least full Vomiting has been thought improper; but I know that Emetics in these Cases will be better borne than has been generally supposed. Full Vomiting is seldom necessary or proper in the Beginning; but whether Emetics would not be useful in Nauseating Doses?. It is highly probable that Emetics may be proper to abate the general Fever and take off the Spasm but of no great use with regard to the Topical Affection: But they are not to supersede the Use of Bleeding. Blisters are a very useful and efficacious Remedy in this disease+. Dr. Pringle applied them early and says they prevent the necessity of taking so much Blood. These are the principal Remedies on which the cure depends; but others are also necessary. The ordinary Terminations being by Expectoration, require attention and the Use of pectoral Medicines of these there are two kinds; the Stimulant and Emollient. Of the Stimulants employed as pectorals are Squills, Gum Ammoniac and Volatile Alkali‡. Squills have been a favourite Remedy with some while others were afraid of their Stimulus; I think them safe but difficult to be rendered useful as being so disagreeable as to be rejected by Vomiting. Their Operation being only on the Stomach and Bowels, by their Emetic Quality they possess no superior Efficacy above other mild Emetics which I think the best Expectorants*; they operate by removing Spasm and relaxing all the Excretories. After Bleeding, Nauseating

+ Their Effects are greater as applied nearer the parts affected.

‡ The long list of Stimulants mentioned by Writers are now generally neglected except Squills. Their Stimulus is but transitory.

* I believe Emetics to be the most safe Expectorants that we can employ and we frequently obtain the best Effects from small and repeated Doses of the milder Emetics.

+ Where Effusion has taken place into the Cavity of the Bronchia Volatile Alkali is very useful and I even think I have seen it preserve Life -

‡ The ordinary Quantity of 2 or three ℥. of Gum Arabic repeated at Intervals can have very little Effect on the whole Mass of Blood.

seating doses of Emetics prove diaphoretics and excite a small discharge from the Stomach. Some recommend Gum ammoniac, but the Objection against Squills on account of their heating and stimulating Quality, applies here with much greater Force, and for my own part I have never seen them attended with any good Effect. The Volatile Alkali I think the most effectual; it is a powerful Stimulant ~~but~~ & is not to be used till the Inflammatory Stage of the Disease is past: In the latter Stage therefore I think it a powerful Expectorant.+ Another Class of Remedies employed as Expectorants are Emollients. The Matter discharged from the mucous Follicles of the Bronchiæ is acrid and by its Stimulus excites Coughing and thereby prevents that Stagnation and Inspissation in the Follicles necessary to render it bland and of a due Consistence. Nature has also endowed the Glottis with extreme Sensibility which is easily irritated, that to avoid this Irritation which even the mildest Food occasions the parts are continually lubricated by a Fluid secreted for this purpose from certain Glands, that when this Fluid is dissipated by frequent Coughing or its discharge suppressed by a Spasm on the Excretories, then Emollients and demulcents may be useful in sheathing the parts from the Acrimony of the Mucus.‡ That they act in this Way is evident from their Effects being immediately perceived as soon as swallowed, hence demulcents are

most

 most effectual when used in a semiliquid form, that th
may be gradually dissolved and swallowed. The most ef
fectual of these is a piece of Gum Arabic held in the m
This may also be given in a Warm Solution and be usefu
by relaxing the Excretories of the Glands; for this purpo
the Steams of Warm Water are very useful when recei
into the Fauces and Bronchia, particularly when the
are affected with Catarrh the Matter is excreted as soo
as secreted; to obviate this, whatever prevents the freque
cy of the ~~pa~~ Cough, allows the Mucus to stagnate
the Follicles and become bland before it is excreted, hence
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crease it, or after its Operation is over the Symptoms re
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it operates by Sweat, and then if a Solution of the Di
ease is not produced the Consequences are danger
therefore in general we should avoid the Use of Opium
untill the Inflammatory Stage is past, after this it i
very safe and useful. Even in some Cases of great Irr
tation, more Advantages arise from quieting the Co
by an Opiate, than to counterbalance any bad Effe
that could arise from its Use.+ We now come to spe
of the Rheumatism this Disease arises from extern
and

+. The Vienna practitioners add a grain of Opium to a dose of Oil. When the disease ends in suppuration or Gangrene the Physician can not do much.

and commonly evident Causes and is attended with Fever and pain of the Joints extending along the Course of the Muscles and chiefly affecting the larger Articulations. This and the Gout are in some respects similar, but as they are different diseases and require a different Method of Cure, so it will be necessary to give you the Characteristic Symptoms of the Gout as well as the Rheumatism. The Gout is preceded by an Affection of the Stomach, with pain generally in the Ball of the great Toe, arising without any sensible Cause and returning at Intervals. No one Symptom is to be considered as pathognomonic; but the general character of the disease is to be determined; they are to be distinguished by the remote Causes. The Rheumatism arises commonly from external evident Causes; the Gout does not but by a phlogistic diathesis determined to the small Joints: It is constantly preceded by some unusual Affection of the Stomach, & which is very singular, that after several days of Indigestion and other Affections of the Stomach; on the day immediately preceding the Attack of the Gout the Symptoms which affected the Stomach entirely disappear and the Appetite is restored. They are also to be distinguished by the part they Affect. The Gout seldom affects the larger Joints or Muscles, which are constantly the Seat of the Rheumatism. Both are found to attack the Hip; in this Case of Rheumatism, the pain extends down the Thigh and is found to spread over many parts of the Body. This rarely happens in Gout; in Rheumatism the

114. the pain may exist equally in several Joints at once. If the Gout changes its Seat the pain is abated in the place it before occupied; in Rheumatism it is about the Joints; in the Gout it is in the Joints. The Gout may also affect any Joint in the Body, but seldom any but the Toes and Fingers; whereas in the Rheumatism it is situated about the Joints and particularly the larger. Both diseases may be cured and again return but the Gout returns most frequently. The Rheumatism returns chiefly in the Spring and Autumn and may return at any time when the predisposing Causes are applied but is not regular. The Gout on the other hand does not return as regularly, is more unsteady and some people say that it is periodical, but this is not always the Case. But the most considerable distinction is the effects of the Gout upon the Viscera which clearly distinguishes it from Rheumatism; and when thrown internally produces various diseases. To these others may be added, first, the time of Life: There are Instances of its appearing very early in Life. A Boy at 12 Years of Age had it in this City; but the common time is about the Age of 35 Years. It seldom attacks before the Meridian of Life and Age may lead us to the Knowledge of it; the Rheumatism most commonly attacks sooner. Another distinguishing Circumstance may be drawn from the ~~Circumstance~~ Temperament of the Patient, the Sanguine being more liable to Rheumatism than Gout. We come now to treat more particularly of Rheumatism: I have told you its predisposing Causes. We are well acquain-

ted

ted with the diseases of all the Northern Climates and in Europe also, where we find the Rheumatism prevails; and yet in the Southern Climates it is very rare. A predisposition to the Rheumatism is acquired by the application of Cold as a proof of this we observe that Rheumatisms are most frequent in this Season of the Year, this is farther illustrated by our Considerations on Climates. In those Countries that have little Winter or Frost, few Rheumatisms are known. The actual Occurrence of this disease depends upon the Action of Heat and Cold alternating, as at the Time of a Thaw in the Spring or Autumn; also when the Fluids have been rarefied by the Heat of Summer the Vessels become more contracted by the sudden Cold of October but this disease happens most frequently in the Spring after some vernal Heat has taken place. From this it follows that a rarefaction of the Fluids while the Solids remain constricted or a Constriction of the Solids while the Fluids are rarefied will in both or in either Case produce an increased Impetus & Distension in the Vessels of the part affected with pain and Inflammation. This cannot long be supported in any Case without producing a Spasm on the Vessels of the part. this Spasm being in a particular part may be easily communicated to the System & produce the Fever which attends it; or an Inflammatory State of the System may exist independant of any topical Inflammation. The general Inflammatory diathesis consists in an increased Tone

or

 or Contractility of the arterial System and may be determined to a particular part, When a predisposition was perhaps at the same present; this Explains the Combination of different Inflammatory diseases and their frequent Change of Situation, viz how pleurisy may shift from one Lobe of the Lungs to the other, and to the Throat; hence also the frequent Change of place that occurs in Rheumatism this therefore proves it to be owing to general Inflammatory diathesis. Of the Cure: In this we proceed on the principles of an Inflammatory diathesis that it is to be attempted by the anti phlogistic Regimen in all its parts. Nothing is more necessary in this disease than Bleeding and with this low Diet; you can hardly lower the diet too much. Runnet Whey is very useful and we are to avoid every kind of Irritation. All the Remedies made use of for Inflammations will be useful and necessary but bleeding is a principal Remedy and should often be used in large Quantities according to the Universality of the Disease, with the Constitution Age and vigour Habit of the Patient; but care must be taken not to Bleed to excess for fear of its producing a relapse and inducing dropsy. This is to be directed by the symptoms and Strength of the patient. We often find that, after the symptoms are abated, there is a great debility owing to excessive Bleeding; a certain Quantity of Blood is necessary but not easily ascertained. The Removal of this disease is not to be expected without Bleeding; and when there is Tumour or swelled Joints Topical Bleeding will be found necessary to relieve the Inflammation there. Topical Bleeding

on many Occasions Bleeding is used to expel—

ding goes no further than to relieve Topical Inflamma-
tion and after this Operation it has been found next mor-
ning in the other limb; but when there is general Phlo-
gistic diathesis, we must employ general Bleeding. Topical
applications are useless unless the Inflammatory diathesis
is first removed. Warm Fomentations unless they effec-
tually relieve, will aggravate the disease not only in the
particular part but in the System in general. Of the
Rubefacientia; they have been employed of late and
the Volatile Alkali combined with Oil, constituting the
Volatile Liniment, appears to be the best, but is not to be
used till the Inflammation is abated. The Translation
of this disease from one part to another is owing to the
too early Use of these Medicines. But a most effectual Remedy
is Blisters applied to the part affected. In Fever Blisters
act as Antispasmodics by relaxing the part to which
they are applied, which Relaxation is communicated to
the System, therefore may be applied to any part; But
not so in Rheumatism. Beside this they act as Evacu-
ants, by discharging a Quantity of Serum and relieving
the Congestion of the Vessels. Blisters however will
seldom contribute to the Cure in a general Phlogis-
tic diathesis but in Topical Inflammation they may
be of Service. Among other Remedies that have been em-
ployed are Sudorific purges as Gum Guiacum which
appears to have good Effects; but the Advantages of these
in removing the Tension of the Arterial System I told
you

 you formerly was not equal and in the early Stage of Rheumatism where the least Motion is painful and when the pain is very violent purging is to be avoided and very gentle Laxative Glysters to be made use of in Cases of Costiveness. Another Method of Cure is by Sweating, this has been lately introduced by Dr. Clarke of Edinburgh but this practice has often been hurtful and its Success entirely depends upon the Manner and Means by which it is excited. It is easy to conceive that in some Constitutions Sweating is excited with great difficulty unless great Heat and Stimulus be applied which was found to aggravate the disease. This rendered the practice doubtful until Dover's powder was introduced which was found to effect this purpose without much increased Impetus of the Fluids. Dover's powder is the best Sudorific and is a Combination of Opium with a portion of a Neutral Salt and the Emetic Tartar. An Opiate combined with a Neutral Salt and some of the Tart. Emet. sufficient to produce a little Vomiting is the best Sudorific to promote a Sweating when necessary. May Sweating be employed before the general Phlogistic diathesis is removed? If we wait until Bleeding takes off the Phlogistic Diathesis, we often find that it will weaken the patient. The Cure will be performed more safely and speedily by Bleeding and Sweating than by Bleeding only; but Bleeding is first to be employed and the Inflammatory diathesis taken down in part before the Use of Sweating. The Method of conducting a Sweat, is to begin in

+ This is not the case with artificial Sweats excited at a proper time of the disease –

in the morning by giving a dose of Dover's powder or some-thing similar and continuing the Sweat through the day and perhaps part of the Night, but if possible it is best when employed in the day and not in the Night – It is best when begun in the Morning after Sleep, for if we interrupt the Nights Sleep we produce Irritation. By Sweating we ~~xxxxxxx~~ remove the Spasm and all that follows after; ~~xxxx~~ the Fe-ver that here takes place is of the Remittent kind; and another Reason for it being best when carried on in the day is because we can have no dependance on Nurses in giving of drinks in the Night. Nothing is more frequent in this disease, than a Spontaneous Sweating to come on early in this disease, but they are seldom useful and not to be en-couraged. Dover's powder contains a large Quantity of Opium and whatever Composition of a similar Nature you employ ought to contain 2½ Grains of Opium in each dose, or 3 grains in some Cases, these will only be proper doses. It is best to lay the patient in Blankets and wear a Woolen Shirt, and the Medicines mentioned above should be Given in form of Boluses covered with a Wafer. It is best when they are dissolved in the Stomach and no liquid should be admitted in order to prevent Vomiting, nor till the Nausea has abated and a glowing Heat with some ~~Sweat~~ Moisture on the Forehead appears, then plenty of diluting drinks given in small Quantities and frequently. All Sweats are useful in proportion as they are general; and as they some-times

times come out slowly in the lower Extremities, we are then to assist it by Warm Bricks and an increase of Bed Cloths applied to the Extremities. By these several Means we produce a Sweat but if the patient complains of extreme heat and anxiety we should then diminish the external Heat for a while as much as possible. When the Sweating comes on it should be continued at least 12 hours and 24 if the patient can bear it, or if the pain is not entirely removed may be continued longer. You no doubt remember the Observations I made upon the practice of Sweating in Fevers recommended by Dr. Chalmers of South Carolina; the Sweating was to be continued untill the time of the next paroxysm was past & as the Rheumatism is often periodical the Sweating should be conducted in that manner. If the patient is restless and will not take any more Medicine, he should at least continue in Bed 24 hours if the disease proves Obstinate the Medicine should be repeated Morning and Evening and those remedies employed with the utmost Extent; and observe this Caution, that if the Morning dose is given and Sweating continued thro the day, the Evening dose must be lessened. Another Remedy is the Bark; there may be Cases where this is serviceable, as every Febrile disease has its Exacerbations and Remissions. In Rheumatism where there are evident Exacerbations and returns in the Evening, where the Urine breaks and deposits a Lateritious Sediment, it is a sign of or a mark of

of a Relaxation of the Vessels and where there are we may employ the Bark with Advantage; and it is best when given in the Forenoon, but whether it will succeed, I have not had an Opportunity to determine. Of the Chronic Rheumatism: in this there is no Fever or Inflammation of a particular Joint, but is so often a Consequence of the Acute and so much like it, as to be considered only as a part of the same disease and is an Affection of the Muscles. To me it appears to depend upon a certain Atonia or loss of Tone in the parts or in other Words a Flaccidity of the Muscles & a Relaxation of the Vessels in their tendinous parts. That the Chronic Rheumatism consists in a Weakness and Want of Tone in the parts is evident from this, that there is a Coldness of the part, whilst a warm sweat appears over the whole Body; the parts affected also with Cold Sweat. This Opinion is also founded upon Experience & practice. Accordingly we find that wrapping the part in Flannel and dipping it in the Warm Bath together with long & repeated Friction, are found the best Remedies. The Cold Bath in the Warm Season is also useful; and the Rubefacientia, Volatile Liniment, Blisters and Riding on Horse Back are all useful and act as Stimulants giving Tone to the part. Internal Medicines may be given & the Gum Guiacum is the most celebrated; taken in such Quantities as to produce a diaphoresis and as a Laxative; this may advantageously combined with Soap in proper Quantities with Tartar Emetic and those made into pills will be

very

very advantageous. Externally Mercurial Ointment rubbed into the part is very useful; with the same View I have used Mercury internally with the best Success; this practice also applies to many other Diseases as the Lumbago, Ischias, Odontalgia &c — Of Hæmoptysis; this is preceded by a Flushing and redness of the Face, pain and Oppression of the Breast, Cough and Spitting of Blood with a Frothy Appearance of it. Hæmoptysis is often innocent, but sometimes attended with dangerous Consequences. The Phthisis pulmonalis is seldom a primary disease, often depending upon an Ulcer of the Lungs in consequence of another disease and often is the Occasion of Hæmoptoe. The reason why Hæmoptoe so often terminates in Phthisis pulmonalis is commonly thought to be owing to the constant Action to which the Lungs are subject which prevents their healing by the first Intention, or when ulcerated prevents their healing as soon as an Ulcer of any other parts of the Body this Opinion is not well founded or satisfactory as they are often found to heal without any difficulty. When ruptured in Case of Hæmoptoe neither is there any thing in the Structure or Situation of the Lungs to prevent their healing. The reason of the frequent return of Hæmoptoe is generally supposed to be a plethora determined to the Lungs; but I think it is rather owing to a particular Change being made in the Ballance of the Fluids by Obstruction of the Menses or other Evacuations

Hæmopto

Hemoptoe does not necessarily produce Phthisis pulmonalis as we know that it may continue frequently to return throughout the whole Course of Life, without producing Ulcerations of the Lungs. We are next led to consider, or enquire on what the difficulty of the Cure of Ulcers in the Lungs depends. Some suppose it to be owing to their being exposed to the air as Cold air is found to retard the Cure of external Ulcers but this not evident or clear. The Case is different, as I think the parts do not admit the free accession of the air at least not Cold air. Hemoptoe in many Cases is innocent, but often precedes a Phthisis pulmonalis; this is not owing to a peculiar Conformation or Situation of these Organs, but to a peculiar Cacochymic State of the Blood; this disease is common to Scrophulous Habits & often affects the Conglobate Glands of the Neck. The Tubercles in the Lungs, resemble Conglobate Glands tumefied; these sometimes happen without Spitting of Blood, but this is often followed by and is a Consequence of Tubercles. Scarce any Spitting of Blood that happens and proves the forerunner of Phthisis, but what is owing to Tubercles; therefore if Hemoptoe and Ulceration of the lungs happen without being followed by Tubercles, they seldom produce Phthisis & therefore I think it probable that when a Spitting comes on it is chiefly owing to Tubercles. The red Vessels of the Lungs are very thin and may easily be ruptured and bring on a spitting of the Blood for the Blood may be poured out by Rupture or Anastomosis, whenever any increased Impetus of the Blood happens and may be produced by Tubercles without

 out any particular determination to the Lungs or plethora preceding. Thus I have given you what is generally the Cause of spitting of Blood from Tubercles, Scrophulous Tubercles are not the only ones that I suppose to be seated here. Another Cause of them consists in a particular State of the Ballance of the System by which a determination to the Lungs takes place and produces effusion either by anastomosis or rupture of the Vessels which Effusion forms itself into a Cyst which straightens the neighbouring Vessels and brings on Hæmoptoe. Another Cause of Tubercles more certain is that which Tradesmen of different kinds are particularly liable to, viz. Dust, as Millers, Stone Cutters and Flax-dressers who are constantly involved in dust of different kinds. Thus that these have Hæmoptoe from the large Quantity of dust lodged in the Bronchiæ and from thence is communicated to the Lungs themselves producing Tubercles. The dust ~~blown~~ drawn into the lungs adheres to the Sides thereof and by its Irritation produces Congestion and so lays the Foundation for all that follows as Tubercles &c. We also observe that the Lungs and Conglobate Glands may be obstructed by different kinds of Acrimony as from Exanthemata and Venereal Virus these first by their Irritation produce Tubercles. The following Case is not easily to be accounted for, which is an Effusion into the Mucous Follicles of a Chalky or Calcareous Substance which is often spit up in large Quantities for a great length of Time; this sometimes produces Phthisis, but at others after continuing a long time the patient entirely recovers it is called an Ulcer mali moris.

For

+ as the Measles

For further particulars on Consumption I would ~~[illegible]~~ recommend you to consult Dr. Reid's on this disease which to me appears the best thing I have ever seen on this Subject. I have given you the Outlines of the Phthisis Pulmonalis and its Connection with Hæmoptoe by which you see that Hæmoptoe is only the Symptom of a prevailing predisposition. All the various Causes of Tubercles, may be the Causes of Phthisis, but when we consider that Hæmoptoe may happen often thro' the Course of Life without producing Phthisis we conclude that Tubercles containing a Matter not capable of being converted into laudable pus are the principal Cause of Phthisis. Of the CURE of Phthisis Pulmonalis: as this depends upon Tubercles and Hæmoptoe, all we can do is to guard against the further Irritation from that Cause. The Methods of doing this we shall place under 4 heads; 1st to obviate and remove plethora. 2nd To take off general Phlogistic diathesis. 3rd To take off the determination to the Lungs 4th perhaps to restore the determination to the Surface. The first viz obviating and removing plethora is to be done by quality of diet. It may be alledged that no general plethora takes place, if there is not we know that there is a partial plethora of the Lungs which requires this Regimen; in the Use of which two Circumstances are to be attended to 1st That tho we are to take off or obviate Phlogistic Diathesis ~~plethora~~ yet we are to avoid at the same time any determination to the Lungs which is produced by Cold and we know that the weakness of the System favours the Operation of Cold, therefore the diet should not be too low. The 2nd

is

2nd is that when the Ulceration has gone to a considerable leng the Matter is of a Sedative Nature and absorbed producing Ulceration and Fever; therefore a Milk diet is the safest and most proper. Another Means of obviating plethora is by Exercise but if there is already a determination to the Lungs, it is dangerous as it produces a quicker and more forcible Circulation; this may be proper in the beginning to promote the determination to the Skin but in general it not the proper means to avoid plethora. The 3rd means to obviate a plethoric State is by Bleeding. The practice of Dr Dover was small and repeated Bleedings but I am not now to enter into any dispute about it; but in Consumptions so far as they depend upon plethora, Bleeding may be employed till that period is past in which Phthisis is to be expected. The 2nd Head is to take off the phlogistic diathesis this is to be done in a great Measure by Blobbletting which is especially necessary, but the Vegetable diet must not be avoided. It is on this principle that Dr Dovers practice is to be admitted. Another Means is by avoiding heat if in a warm Season Heat is found to increase it, and upon this principle Consumptive people were ordered to be sent to warm Climates in Summer but this is injurious as Phthisis is found to increase much faster there than in a moderate Climate. The 3rd Head is to take off the determination to the Lungs; and as the Application of Cold tends to increase it it is chiefly to be avoided; for we know that the Windy Seasons commonly produce Phthisis pulmonalis. The avoiding a determination to the Lungs is to be done by promoting the determination

+ the principle Remedy

nation to the Surface. For this purpose light warm Clothing is necessary, particularly wearing Flannel next the Skin; this is of great Importance and Advantage as it will promote an equable perspiration. The Temperature of the Air should never excede 62 or 64 degrees of Fahrenheits Thermometer and should be very little below it. Besides the Change of Climate this purpose is in some measure to be answered by Blisters and Issues. The latter which have been used contribute greatly to remove plethora and take off the determination to the Lungs. Blisters are the most useful when employed after the Manner of Issues by a perpetual Discharge. The 4th Indication in the Cure of Hemoptoe is to support the determination to the Surface; this is to be performed by the different Modes of Gestation which acts by its Stimulus upon the Sanguiferous Vessels; therefore every gentle and constant motion by Exercise increases the determination to the Skin. Dr Sydenham recommends riding on Horseback and speaks in the strongest manner of the Usefulness of this kind of Exercise; and another Gentleman, of Judgment & Sagacity says that Dr Sydenhams Exercise has killed more than ever it cured; but I suppose both have their prejudices. On the other hand there have been many Instances of Cures performed thereby. Some cannot bear riding at certain times and at other times it is of service. Hard Jolting in Carriages is also dangerous and it is true that riding in a Carriage over Stones &c has produced an Hemoptoe and by two or three days rest it has been removed. No Method of

riding

 Riding succeeds so well as long Journies with good Company but this is now spoken of with less confidence than formerly. The Ancients recommended Sailing and it is now adopted by most Moderns; it is of all others the best Method of Gestation. On this Subject you may consult Dr. Gilchrist: Its use does not depend upon the Sea Sickness as some have supposed tho this may be in some measure useful by nauseating and thereby Increasing the determination to the Surface. Another Benefit arising from the Sea Air is its equal Temperature and not from its humidity; but its greatest advantage arises from the particular Motion agitating the Fluids proving a constant and gentle impulse on the Vessels without Bodily Exercise both Night and day, asleep or awake, and therefore is the most useful Method of determining the Fluids to the Surface. Sailing is not only of Service here but in many Chronic diseases which require this determination. From all that we have said we learn that an Hæmoptoe is not always dangerous no more than a bleeding of the Nose and that the danger will be in proportion as it tends to produce Consumption or an ulcerated State of the Lungs. Of the Prognosis: It is difficult to determine in what State the Consumption may be said to be curable or incurable as no certain Criterion has been found. When it is curable the remedies are nearly the same in all its stages. The Cure I told you was divided into 4 heads, altho' I have omitted many others that might have been mentioned; but the Remedies already mentioned and recommended I shall now

state

state in the Order they are generally required. First frequent small Bleedings, once every 2, 3 or 4 Weeks to take off plethora and remove the phlogistic diathesis. 2nd A diet consisting chiefly of Milk and ripe Fruits, where the patient can bear them, being excellent Refrigerants. Rennet Whey for common drink will be useful and where acidity prevails in the Stomach weak flesh Broth or Eggs boiled soft may be allowed; but if possible this last diet should be avoided. To take off the determination from the Lungs Blisters or Issues may be applied to the part most affected and repeated as soon as dry. also cupping and Scarification, Exercise in a Carriage where Strength will permit, but above all Sailing. I have seen instances where the Sea air was so disagreeable as not to be borne, but this is an uncommon Circumstance. The only internal remedy that I have found useful is Ipecacuanha 2 or 3 gr. Magnes. 10 gr. The Magnesia I order to remove the Acid in the Stomach or rather uniting with it forms an earthy neutral Salt which proves diaphoretic. The Ipecac. is also diaphoretic & antispasmodic assists Expectoration and determines to the Surface. When the Phthisis arises from Scrophula I order Calomel with the above, about 1½ Grains; but where there is a phlogistic diathesis in the System large doses of Calomel would be injurious by its Stimulus & care is to be taken that it does not affect the Mouth. Mercury when a Phthisis is produced from Scrophula will be best; and Mineral Waters may be allowed

especially

especially if mixed with Milk. If the Stomach is greatly relaxed with Nervous Symptoms, Steel may be added to the Magnesia and given 2 or 3 times a day. Elixir of Vitriol is good but if you find it produce a tickling Cough you must forbear its Use. To remove a tickling Cough I order a piece of Gum Arabic to be held in the Mouth and gradually dissolved. I never give Balsams, Jellies nor Syrups of any kind as I commonly leave this for Old Women to prescribe. We are next to treat of the Dysentery. It is defined to be a disorder consisting in a Contagious Fever with a frequent discharge of Mucus or Bloody Stools while the Natural Faces are retained, with a violent Griping and Tenesmus. 1. It is not determined whether the Contagion is of a Specific kind and how are we to distinguish this from other preternatural discharges from the Bowels? The most certain Criterion is its always being contagious. A Diarrhoea is without Contagion. 2nd While the Stools (mucous) are frequent and Bloody (which is not pathognomonic) the natural Faces are retained. In Diarrhoea there is no retention of them. As we have now established it we shall go on to consider its History. 3. The Dysentery generally appears in Summer & Autumn and we further observe that as it appears at the same Time with Marsh Fevers 4. it is supposed to be owing to the same Marsh Effluvia which produces Intermittent and Remittent Fevers differently modified by Circumstances. The ordinary Appearance of the Flux is

1. The History of this Disease is well delivered by later Writers. The discharges by Stool are of considerable Variety and owing to Different Causes.
2. Bloody Stools by no means apply in forming a distinguishing Character of this Disease: There is the Dysenteria alba; hence we see its not being attended with bloody Stools does not prove that it is not the Dysentery
3. The Dysentery may and does appear at any time of the Year but its ordinary Appearance is in the Summer & Autumn.
4. Fever and Dysentery often occur together.

1. The Dysentery, like other bilious Disorders may appear early in the Summer

2. In 40 Attempts to go to Stool the discharges are not equal to one produced by a purgative. Mucous or Bloody Matter in small Quantities may be furnished by the Rectum.

3 There i.e. the Natural Faces.

4. Upon exhibiting a purgative the Faces are evacuated which affords relief

is always in Summer Season or Autumn. We find that Dysentery as well as the Intermittent and Remittent Fevers does not appear till after the Hot Season has produced a Change in the state of the Bile, favouring the Operation of the Contagion. Other Causes may also occur, the principal of which is the Obstruction of perspiration owing to Moisture. Of the Operation of the Contagion in producing the disease: It first produces Fever, an acrid Matter is thrown upon the Intestines producing increased peristaltic Motion and hence an increased Secretion and Ejection of Mucous Stools without any Appearance of the natural Faces. These appear on the Administration of purges, therefore the Notion of some that the matter discharged by Stool was the Natural Faces dissolved and assuming that appearance is groundless for they are not dissolved, but retained and when they do appear it is in the Form of hardened ~~Faces~~ feculent matter, or Scybala. From this it appears that there is preternatural spasmodic Constriction of the Colon which prevents the Faculent matters from being evacuated. To this it may be objected that the Stools are sometimes plentiful and in too great Quantities to be excreted from the Mucous Follicles of the Rectum. In answer to which I grant that the Colon may admit the more fluid Parts of the Faces to pass, while the grosser are retained, this is proved from their afterwards being discharged on the Exhibition of a purgative, together with the Hardness and Form of Scybala. This also frequently happens in Cases of Colic. The only Doubt is whether the same

same Matter that affects the Colon affects the Rectum. In my Opinion it is different and the latter is the Effect of the Spasm on the former. The Spasm emulges the Follicles, produces a discharge of Mucus and even of Blood from the Vessels superficially situated upon the Rectum; and also compressing the Faces into the Cells of the Colon forming the Appearance of Scybala. This disease has different Situations and different degrees of putrescency. Pustules have been found ~~in~~ over all the portion of the large Intestines upon dissection, these I think are Effects and not causes of the disease. The Theory of this disease is that the Colon is considered to be under Constriction, with this Constriction there is some peristaltic motion and while it is not sufficient to push the hardened Faces, it pushes the Mucus and at the same time throws the Blood with it which will account for the whole Phanomena. Of the Cure: The first Indication is to obviate or remove the Constriction of the Colon; this is to be done by the prudent use of Laxatives or Purgatives combined with Opium and frequently joined together, these ~~are~~ were given with a View of throwing off or evacuating any offending Matter, which if the passage of the Intestines is opened freely passes off; 2 The principal Intention is to remove the Constriction of the Colon which causes the hardened Faces. Rhubarb and Calomel have been much esteemed by late Writers but are very improper as all acrid purges are to be avoided as they cannot be given often enough to remove the Symptoms. The Mildest purgatives are to be employed

and

1. Whether the same Matter that produces the Constriction of the Colon irritates the Rectum to more frequent Contraction. The Doctor thinks not. The Explanation is thus: The Colon is under Constriction by which it is more exactly divided into those Cells in which the Scybala are retained — this Constriction is propagated down to the Rectum and promotes the Excretion of Mucus &c.

2. Dr. Springle says their use consists in evacuating the hardened Faces, but neither does this come up to my Idea

and the want of Force or activity should be supplied by their more frequent Use; they should be applied early in the disease as being more effectual in removing Constriction and should be given more frequently to prevent a return of the Constriction. The Laxatives that I employ upon this Occasion and with the greatest Success are the Neutral Salts & Castor Oil; the latter is particularly to be attended to if the Scybala are evacuated it is a favourable Sign and when not followed by the usual Griping, Pains and Tenesmus. The Cure is therefore to be performed by the proper Use of purgatives thereby to procure an Evacuation of all the Vitiated Bile or acrid Matter, (I speak in the Language of Gowers) and a Solution of the Constriction. The most certain Remedy to remove Dysentery is mild purgatives made use of till all the vicious Matter is evacuated. Some as I have mentioned to you, make use of Rhubarb and Calomel, but when we have recourse to such a Remedy as Calomel we cannot repeat it but at very long Intervals and altho' they give ease they favour a Constriction and are therefore mischievous and hurtful. Astringents are improper in the first Stage of Dysentery and must not be employed till the advanced State where there are great Symptoms of Debility &c. I shall next consider Laxative Medicines; my practice of administering them is to keep the Bowels constantly open till they are sufficiently evacuated: thus I give Sal. Glaub. ℥j every two hours: Crem. Tartar. may be employed for the same purpose given in

 in Beveridge. Dr. Zimmerman has a Treatise on this disease; and with great propriety in my Opinion condemns the use of Rhubarb here. I hope physicians will renounce the Use of Rhubarb as a purgative as it is dangerous; it was formerly much esteemed but in my Opinion is not safe. It is indeed a good Stomachic Bitter and Astringent and may in some other Complaints do good. The Use of Opium however as frequently employed has been ~~Deputed~~ rejected by some, but is undoubtedly of Use in many Cases of Dysentery both to remove Constriction and take of Spasm and pain. The Violence of pain often requires Opium, and it is proper to give it to remove this and to give ease that the patient may recover Strength in some measure. Thus to give Salts in the day and an Opiate at Night to procure Sleep is the best Method. It is not to be thought an Astringent altogether, it does not act directly as such but only suspends the discharge for a short time. In general it contributes but little to the Cure but is necessary as a palliative. I here shall give you an Instance of a Woman who had lain in about 48 hours and who had a violent Dysentery; I gave her a dose of Opium afterwards a Laxative as Castor Oil and after this gave the Bark for there were evident Marks of putrefaction — If the Symptoms are relieved by purging only the Use of Opium will be less necessary. There are also other Remedies which may occasionally be employed; in the Young and ~~ple~~ Plethoric Bleeding particularly in Cases of Inflammatory diathesis. The Stomach is often affected with

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Loss of Appetite and Nausea. The Bile being carried into the Stomach, the Interruption of the passage of the Intestines favours the accumulation of crudities in that Organ. It is with propriety then that the Cure is to be begun with an Emetic, but Emetics however will not cure the dysentery, without they act as purgatives. Sometimes the Affection of the Stomach produces Acidity, but Absorbents should be used with Caution and as Acidity is of Service to keep off putrefaction we should not be in a hurry to obviate it. To prevent the putrid Fermentation Acescent Vegetables and acids are necessary. Demulents as Oils and Gum arabic are sometimes necessary. Emollient Glysters have been used with Success and require your attention. There are two other Remedies of Use viz. Blisters to the Abdomen and Fomentations to the Lower Belly; these are of great use in this disease. If there is a great Tendency to putrefaction and evident Symptoms thereof, which we judge of from the Season, the nature of the prevailing Epidemic, and the Quick low pulse &c we then order Acid Wines & Bark which are necessary particularly if it is attended with periodical Movements. These are the different Medicines made use of by me and I can with Truth declare that I never lost but two patients in this disease, and to those I was called in the advanced Stage. For further Information on this Subject consult Pringle, Zimmerman & Baker. If a Diarrhoea succeeds the dysentery Astringents are to be used

 used as strong decoctions of Bark with Elix. Vitriol &c. To render the Subject more clear I shall here repeat the Cure that you may comprehend it in a shorter View. First, Bleed if an Inflammatory diathesis prevails in the System. Second, Evacuate the Stomach by a dose of Ipecacuanha or Tartar Emetic; in the Evening give an Anodyne diaphoretic Bolus. Third, Laxative such as Glauber's Salts with Tart. Emet. to determine to the Surface &c repeating the above Bolus in the Evening at Bed Time. This Treatment is to be continued untill the disease is removed. If the Griping is very severe Laudanum may be mixed with the Castor Oil and a little Sp. Lavend. Comp. or Cinnamon Water to make it more grateful; Beside these Fomentations to the Abdomen and Boluses of Camphor with Theriac are excellent remedies. Setting over the Hot Bath is excellent; the drink must be acid and diet must consist of Fruits & Milk &c. I have thus, Gentlemen, given you the Methods of Cure and have repeated those which I wish you to remember. I must now conclude with my sincerest Wishes for your Wellfare, also hoping you will always conduct yourselves in such a Manner as to do to Service to your Fellow Creatures and to get honour to yourselves, remembering to do unto all Men as you would they should Do unto you.

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